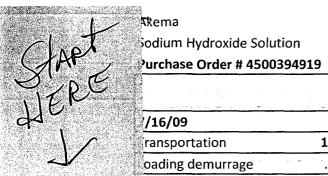


JB

assigned

START July 2009 Thru Start



2 Hrs Free Loading

				Customer]
			CES Cost	Charge	0.31 /
₹/16/09					
ransportation 1 Load				400.00	
oading demurrage .25 hrs				17.50	
3.5% Fuel Surcharge				56.36	
Management Fee (Sochem) 4958 gal	BOL 88872	4958	297.48	1,536.98	
Trans - Outbound Accrual (CES Internal)			743,70		
1% Compliance Fee			20.11	20.11	
			\$1,061.29	\$2,030.95]
to DeRidder			\$96	9.66	1

Akema

Sodium Hydroxide Solution

2 Hrs Free Loading

Purchase Order # 4500394919

					Customer
				CES Cost	Charge
7/17/09					
Transportation 1 Load					400.00
Loading demurrage 1.5 hrs	5				105.00
13.5% Fuel Surcharge					68.18
Management Fee (Sochem) 515	9 gal E	OL 88871	5159	309.54	1,599.29
Trans - Outbound Accrual (CES Interna	al)			773.85	
1% Compliance Fee				21.72	21.72
				\$1,105.11	\$2,194.19
to DeRidder		······		\$1,08	9.08

Sodium Hydroxide Solution

Purchase Order # 4500394919

2 Hrs Free Loading

	19.5			Customer]
and the second	The grown of the	<u> </u>	CES Cost	Charge	0.31 / ga
7/16/09					
Transportation 1 Load				400.00]
Loading demurrage .25 hrs				17.50	le deserve
13.5% Fuel Surcharge			the second	56.36	
Management Fee (Sochem) 4958 gal	BOL 88872	4958	297.48	1,536.98	a feeta too aa see aa ah aa ah aa aa
Trans - Outbound Accrual (CES Internal)			743.70		
1% Compliance Fee			20.11	20.11	
			\$1,061.29	\$2,030.95]
to DeRidder			\$969	9.66	1

Akema

Sodium Hydroxide Solution

2 Hrs Free Loading

Purchase Order # 4500394919

				Customer	
			CES Cost	Charge	0.31 / ga
7/17/09					
Transportation 1 Load				400.00	
Loading demurrage 1.5 hrs				105.00]
13.5% Fuel Surcharge				68.18	
Management Fee (Sochem) 5159 g	BOL 88871	5159	309.54	1,599.29	
Trans - Outbound Accrual (CES Internal)			773.85]
1% Compliance Fee			21.72	21.72	
			\$1,105.11	\$2,194.19]
to DeRidder			\$1,08	39.08	

CES Environmental Services, Inc. Profit & Loss Sheet

CONFIDENTIAL

CONFIDENTIAL

Billing/AP Information		Salesperson: J	oy Baker	
Name: Arkema Inc		Assigned:	Unass	igned: x
Contact: Brantley Moonyham Address:		Folder I.D:# Arkema (Arkema - Haden Rd) Caustic Management Non Bulk Disposal		
hone:		Job Contact: Grace Dean Phone: 713-450-6746 Fax:		
P.O.Required: Y. x City of Houston: Y.	N. X	Fuel Surd 4-hour Mil	nimum: Y:	X N: X
Base Oils Black Oils Light Ends G	N. 18 A. W. S.	Ision Oils (>70% o stimate Profile #	Emulsion Oils CES Cost	Customer Charge
elletti.	J VENDOIS	I Julie #		MAY 2
Product Management	CES	2602		\$0,54/gal . 31 /9.
ransportation (inc 2 hrs loading)	CES			\$400/load
)emurrage	CES			\$70/hr
FSC	CES			20% 247 265%
Sole & Sucharge upto 190/	Ol per gold	malene 190		
Occural - Sochem CES Intend hand Co			. 06/9AL .15/gal	
10 1/ 1	(Assemb)		.15/gal	
KMTEX - IN OUT FEE KMTEX - Storage Fees				
		Request/Requireme	mt	
	394919			
Send invoice to corporate address				

CONFIDENTIAL

4904 Griggs Road Houston, TX 77021 Phone: 713-676-1460

Fax: 713-676-1676

September 13, 2007

Brantley Mooneyham Arkema Inc 2231 Haden Road Houston, TX 77015

Re: Transportation and Product Management Quote

Dear Mr. Mooneyham:

Thank you for your interest in CES Environmental Services, Inc. and our industrial waste transportation and disposal services. Please find below our proposed scope of service and associated pricing for your consideration.

Scope of Service

- CES will provide transportation & product management of Arkema's spent caustic stream estimated at 150,000 gallons per year.
- CES will provide for the profile, bill of lading, labels, and appropriate shipping documents.

Estimated Costs

Description of Service		Price	Prince May 09
Product Management of spent caustic stream	\$0.54	per gallon	31 19AL
Transportation	\$400.00	per load	
Fuel Surcharge		20%	

Conditions/Assumptions

- The above pricing is based on time and materials, the customer's invoice will reflect the actual quantities utilized on the project.
- Product management fee includes up to 1% solids in the caustic stream. Additional solids will be assessed surcharge of \$0.01/gallon per percentage solids.
- Transportation rate (if applicable) includes enchour loading and unloading time. There will be a demurrage charge of \$70/hour.

It is our sincere hope that you find our proposed scope of service and associated pricing appealing and will consider utilizing the services offered by CES Environmental Service, Inc. If you have any questions or comments or would like to begin service, please feel free to contact me at 281-701-8511.

Sincerely,

Joy Baker Account Manager



Invoice

Date	Invoice #
7/28/2009	57871

4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460

Fax: (713) 676-1676

Bill To: Arkema, Inc.

Attn: Accounts Payable 2231 Haden Road Houston, TX 77015

		P.O. No.	Terms	Pr	oject
		4500394919	Net 30		
Quantity	Description		Manifest #	Rate	Amoun
1	7/16/08 Transportation services by CES @ \$400	0.00 per load		400.00	400.0
0.25	Loading demurrage @ \$70.00 per hour 13.5% Fuel Surcharge			70.00 56.36	17.5 56.3
4,958	Recycling of flammable liquid, corrosiv carbon disulfide @ \$0.31 per gallon	BOL 88872	0.31	1,536.9	
	1% Compliance Fee			20.11	20.1
	CES Job#88872				·
Ve appreci	ate your business!		Subtotal		\$2,030.9
ccount is d	nt Policy: Any unpaid balances begining on ue will accrue a per annum interest rate of 7		Sales Tax (8.	25%)	\$0.0
ated in a fo	ormalized contract.		Total		\$2,030.9:

CES Environmental Services, inc.

Bill Of Lading # :

88877

Folder in :		ma (Haden i				
	(Caus	die Manager	11011			
Secure of the second se	What I is	*** · · · · · · · · · · · · · · · · · ·	2-24	Acce	274 7 4.8	E-5 1 4
Onoinsi -	- Shioner	Provided	5-37-435°	Frem	Strainth	

Lading - Not Negotiable - Domestic

SHIPPED FROM:

Arkenia, Inc. - Houston 2231 Haden Road

Houston, TX 77015 (713) 450-6770

11a) PA-260Z

8711

11b)

11c)

110)

The property described below, in apparent good order, as capt as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to carry to its consum place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. This BH of Lading is a receipt for goods, it is not of itself a contract of carriage. It is mutually agreed, as to each carrier of all or as to any said over all or any portion of said coute to destination, and as to each carrier of all or as so any said over all or any of said property, that every service to be performed heraunder shall be subject to all the terms and conditions contained in the applicable contract between shipper and carrier or intermediany

For payment, Charges to be billed to Shipper of the "Silled for party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed to Shipper or the "Billed to" party without prior written consequed Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the treight bill successful to Shipper or the "Billed to" party and sentition.

CONSIGNED TO:

CES Environmental (Port Arthur)

2420 Gulfway Dr.

Port Arthur, TX 77640

CARRIER:

CES Environmental Services, Inc. 3

4904 Griggs Rd.

Houston; TX 77021

The is reflectify that the product stated below are properly classified, described, packaged, marked and labeled and is in proper condition for transportation according to the appointment of Transportation according to the appointment of Transportation, if this state whether 100 Its "certier's or shipper's weight."

intermedial Ceruncase. All Information required by Federal Highway Administration regulations at 48 CFR 380.500 implementing the intermedial Base Container Act of 1597 is set for the original of taking. The ampper name recent is the tendening party.

laz	Cont	auet	Total	Unit	Description of Materials, Special Warks,	and Exceptions
	No.	Type	Quantity	MADAGE		
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		-	and a second second second			1028 17 100 fr 63
		and the control of th	المعجودة فالمراد فالمراد والمراد			314
		and the second	patengenerange	m D	195	
			a line -	Housto		
er :	lve	3/ex	Joy		Signature: Waly Say	Date: 07-16-09
arri.	The state of the s	managin samura tau tandaa		witness or the selection of the selectio	ices, inc	
er :	14	esta	SANJ	ers_	Signature : Kesta Jantino	Date : 07-16-09
ecei	ivipg	Facili!	y CES	Environ	mental (Port Arthur)	
			, Mal		Signature: Stale	Date: 07:76:09

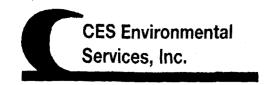
winte (Generator Return Copy)

Yellow (Transporter Copy)

Plot in seening Facility Copyr

Golden Roy (Generator 1st Cops

andre de la companya La companya de la co



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

Inbound Load Report

Job Number :	88872	
Type of Material:	spent caustic	
Job Date:	7/16/2009	
Bill of Lading #:	88872	· · · · · · · · · · · · · · · · · · ·
Customer:	Arkema, Inc Houston	
Gross Weight:		
Tare Weight:	OR	Total Gallons Shipped:
Net Weight:	43280	
Shipping Inf	formation	
Carrier:	CES Environmental (Port A	orthur)
Truck Number:		
Trailer Number:	224	
CES Laborato	ry Use Only	Misc Notes:
Specific Gravity:	1.047	Sulfides - 0.653% Mercaptanes - 1.306%
Pounds per Gallon:	8.73	NaOH - 5.084%
Temperature:		Carbonates - 2.43%
Total Gross Gallons	4958	
% Water		
% Solids		
Total Net Gallons:		
(minus water and sol	iids)	en de la companya de La companya de la co
Sample Analyst:		tana di kacamatan di Kabupatèn Bandaran Kabupatèn Bandaran Kabupatèn Bandaran Kabupatèn Bandaran Kabupatèn Ban Bandaran Bandaran Ba
	(signature)	
Sample Analyst:	Unassigned	Date: 7/16/2009

CES Environmental Services, Inc.

100877

4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1675

Transportation Work Ticket	3	e weeks sign and a sum of sum
Folder II) : Arkema (Haden Rd) Caustic Management		
Date: 7/16/2009	Wanifest #:	
Arkema, Inc Houston		
Ciert;	Ticket: 98872	arrigo tira ya na maka kananda mara da marakina ya 160 kananda da kananda ya kina maday ya ya kananda <mark>kalanda k</mark> ina da 160 da 167 ya 1
Phone: 7134506770	CES En	vironmental (Port Arthur)
CES Environmental Serv		
Signature Weeks Joy	Signature	
Leave CES Vard: 705 Arrive At Customer: 800 \ Begin Loading: 904 \ Finish Loading: 1021	Arrive At Destina 2,25 Begin Unloading Finish Unloading Leave Destination Arrive At CES Va	: 140
Leave Customer: 1100/	Leave Destination Leave Destination Amuse At CES va Total Hours:	rd: 415
		Source of a transmission of the transmission o
Gross Weight:	Ending Odomete	The same of the sa
Tare Weight:	Begining Odome	
Net Weight: 43280	Total Miles:	214
Wiver: Some FORV Reston Stands	exs Tractor # 202	Tote #:
gnature : Keston Bandar	Trailer # : 234	Box#:
b Comments/Equipment :		
general control of the second		
White (CES Office) Yehow (CES (Dinice / Billing) Pink (CES Office / IF)	(Customer)

al a		en i servicio de la compania de la c
WEIGHED O	N A FAIRBAI	NKS SCALE
•		
CUSTOMER'S NAM	ЛЕ	
ADDRESS		
COMMODITY 5		itic
CARRIER	<u>13 - 23 4</u> LOUP B 19	
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OUTBOUND DATE	07-16-09 TIM	07:20 AM NE 09:39 AM
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	76000 32720	
	State State 1 State Stat	
DRIVER ON	OFF	
	w · · · · · · · · · · · · · · · · · · ·	
OURDER		
SHIPPER		
WEIGHER	101	
	FAIRBAN	KS SCALE CAT. 16288

CES Environmental Services, Inc.

Invoice

Date Invoice # 7/28/2009 57872

4904 Griggs Road Houston, TX 77021

Phone: (713) 676-1460 Fax: (713) 676-1676

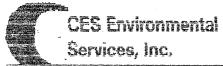
Bill To:

Arkema, Inc.

Attn: Accounts Payable 2231 Haden Road Houston, TX 77015

		P.O. No.	Terms	Pr	oject	
		4500394919	Net 30			
Quantity	Description		Manifest #	Rate	Amount	
	7/17/08					
1	Transportation services by CES @ \$400	0.00 per load		400.00	400.00	
1.5	Loading demurrage @ \$70.00 per hour 13.5% Fuel Surcharge			70.00 68.18	105.00 68.18	
5,159	Recycling of flammable liquid, corrosiv carbon disulfide @ \$0.31 per gallon	e, (sodium hydroxide,	BOL 88871	0.31	1,599.29	
	1% Compliance Fee			21.72	21.72	
·	CES Job#88871					
Ve apprecia	ate your business!		Subtotal	<u> </u>	\$2,194.19	
ccount is d	nt Policy: Any unpaid balances begining on tue will accrue a per annum interest rate of 7.5		Sales Tax (8.	25%)	\$0.00	
tated in a fo	ormalized contract.		Total		\$2,194.19	

TT#234



Bill Of Lading #:

88871

Fold	e În :		etic Manager ema (Haden i		
Orig	ginal –	Shipper	Provided	Short F	orm Straight Bill of Lading – Not Negotiable – Domestic
3 H	PPEL	FROR	10 a		
Ark	ema,	inc F	louston		11a) PA-2602
223	31 Hac	ien Ro	ad		110)
		. TX 77	015		11c)
(71	3) 450	1-6770			11c)
ente c carry acoda acoda any itr betwe For pa	rainter (the to its unusi c it is not o me interest en shipper yment: Cha	word carrier uai place of o fitself a conf ted in all or a and carrier o arges to be b	being understo felivery at said tract of carriage my of said proport or intermediary lifed to Shipper	od throughou destination, this mutual enty, that eve or the "Bille	cept as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which if this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for ity agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party by service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract d to" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed sent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shippers, must be attached to the treight bill
EUCHNI 	ded to Stup	oper or the [*] 8	lilled to" party a		
		WID TO		st with	CARRIER:
		ronner Way Dr	ital (Port	AIIIIII) CES Environmental Services, Inc. 4904 Griggs Rd.
		-			
-		ır , TX			Houston, TX 77021 classified, described, packaged, marked and labeled and is in proper condition for transportation according to the
	i the face of		iding. The ship	per name he Unit	Highway Administration regulations at 49 CFR 330.549 implementing the Intermodal 8afe Container Act of 1997 is set rein is the tendering party. Description of Materials, Special Marks, and Exceptions
	No.	Туре	Quantity	i wovo:	
25	1	TT	4504	0 P	UN 2924, Flammable liquid. Corrosive, n.o.s., 3, PG II
******* ****		***************************************			
		Pyl - Nr Add Shinaillide and many panguage			
nip.	per:	<u>Arkema</u>	3, MC 1	iousto	T)
i di	<u>G</u>	pace	Dea		Signature: Srac De Date: 7/17
arri	ier <u>C</u>	ES Env	ironmen	tal Sen	vices, Inc.
£ 55 g	Rob	ert l	fichn	191	Signature: Robert Suchum Date: 07-17-0

White (Generator Return Copy)

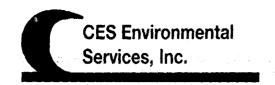
Yellow (Transporter Copy)

Receiving Facility CES Environmental (Port Arthur)

per Johnstone Maleche Signature: Bulale:

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Gopy)



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

Inbound Load Report

Job Number :	88871				
Type of Material:	Caustic	The state of the s		englisher of the same	and a second of the second of
Job Date:	7/17/2009				
Bill of Lading #:	88871				
Customer:	Arkema, Inc Houston				
Gross Weight:					
Tare Weight:	0	R Total Gallons	s Shipped:	5159	
Net Weight:	45040		•		
Shipping Inf	ormation				
Carrier:	CES Environmental Servi	ces Inc			
Truck Number:	281	CC5, 171C.			
Trailer Number:	234				
ranci ramber					
CES Laborator	ry Use Only	Misc Notes:			
Specific Gravity:	1.047	% Caustic 5.08			
Pounds per Gallon:	8.73	•			
Temperature:					
Total Gross Gallons	5159				
% Water		į			
% Solids	0				
Total Net Gallons:	5159				
(minus water and soli	ids)	•			
Sample Analyst:					
	(signature	?)			
Sample Analyst:	Bo Cumberland		Date: _	7/27/2009	<u>)</u>

CES Environments! Services, inc

CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

Tansportation Work Ticker

ar ar an an	REPERCENT AND THE RESERVED.
Folder III	Arkema (Haden Rd) Gaustic Management
	7/17/2009
	Arkema, inc Houston
Ohnse :	710 450377 0

Transports:

Simmone

Consignee :	ma 2001 (10) - 2001 (12) 2 2 2 2 2 2 3 3 2 3 3 3 3 3 3 3 3 3 3	mesame fils	are aresteals	Į.
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Arrive At D	estination	12.0	29	

	A			and the second s
Leave CES Yard:	0700	reconstruction and the other transactions and references are used from the countries.	Arrive At Destination	12.25
Arrive At Customer .	0730	3,54	Begin Unicading	1345
Begin Louding:	0830	2 Avec	Thish Unloading:	1415
	1030	ZIGM	Leave Destination:	1425
i.espe Cisioner:	1100 /	· was	Arrive At CES Yard	1700
		JAN	reconstitute for the product of the	
	., 6	A		функция и выправления при

Manifest # :

Ticket:

	Customer PO #:		Total Hours:	The second secon		
	and the control of th	75380			737 94	e alfanteramentamen
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Per P. San St. Congress on	het Weight:	45040		ofal Miles:		2 6 C

Miller: Hickman, Robert		Tractor #:	359	TWE # :	
Signature: Rehat Wir	Contract .	Trailer # : 3	III.	Eox #	et universitäten egyppisch
Job Comments/Equipment :					

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141.45	 		occurrence de la constante de	as de some men parten	· *1 radium nati i e. at	er againment agreement ag	garrige one become about		e alter e nagrammagen u	Control of the second of the second	PARIS NOW SEE SECTION F	More Messacratic come	دائق ، دەكئرۇسسۇرگەن ئەكتى:		tjet men termini i	. Prince Petrologic	no 17-de par 18 lempane tida	wanter or all whose		· · · · · · · · · · · · · · · · · · ·	Francis - Disable and Co.	.,
141.45	 e e este e e e e e e e e e e e e e e e e			دودون معسد مارد دار به	County de materiale, de	en and a second	.ga=1988 - an 1841 - an 1841	, o příma kaproku, a pře -	o de la primario	north for interesting a veget place	erness. November satisfaction is	Plane Minima the leave	referencesses	an majoration	type varan Versands a	v PPP Book White Pro	ny 17-is ya 18 birgaye Bês	manner _{a i} r sil abing	- 	e en ar de graper regular-	eroenir - "Thabreaus,	

white (CES Office)

Yellow (CES Office / Billing)

Pink (CES Office / IFTA)

Golden Rod (Customer)

WEIGHED ON A FAIRBANKS SCALE **CUSTOMER'S NAME** ADDRESS COMMODITY LOOP R ID INBOUND 30340 lb 77-17-09 07-17-09 TIME INBOUND DATE 07:07 AM 09:33 AM **OUTBOUND DATE** LOOP R 75380 15 30340 15 DRIVER ON WEIGHER

FAIRBANKS SCALE CAT. 16288

CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676

	Invoice
Date	Invoice #
7/28/2009	57872

COPY 7/28	the sale of		_ a man an an ana		
U 1 2 7/28	0	15	70	T	D
				S. WILLENS	7/28

Bill To:

Arkema, Inc.

Attn: Accounts Payable 2231 Haden Road Houston, TX 77015

				, .	
		P.O. No.	Terms	Pr	oject
		4500394919	Net 30		
Quantity	Description	า	Manifest #	Rate	Amount
	7/17/08 Transportation services by CES @ \$40			400.00	400.00
1.5	Loading demurrage @ \$70.00 per hou 13.5% Fuel Surcharge	r ·		70.00 68.18	105.00 68.18
5,159	Recycling of flammable liquid, corros carbon disulfide @ \$0.31 per gallon	ive, (sodium hydroxide,	BOL 88871	0.31	1,599.29
	1% Compliance Fee			21.72	21.72
•			· .	·	
	CES Job#88871				
We appreci	ate your business!		Subtotal		\$2,194.19
Late Payment Policy: Any unpaid balances begining on the 30th day after the account is due will accrue a per annum interest rate of 7.5%, unless otherwise		Sales Tax (8.25%)		\$0.00	
stated in a	formalized contract.		Total		\$2,194.19

CES Environmental Services, Inc.

Bill Of Lading #:

Folde(_)D :

Arkema Maden Rdi Caustic Management

	vided Short Form		

SHIPPED FROM:

(713) 450-6770

Arkema, Inc. - Houston 2231 Haden Road Houston, TX 77015

11a) PA-260Z

110)

11c)

11c)

The property described below, in apparent good order, except as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to carry to its unusual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for goods; it is not of itself a contract of carriage. It is mutually abreed, as to each carrier of all or any said over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract between shipper and carrier or intermediary.

For payment: Charges to be billed to Shipper or the "Billed to" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be bille to Shipper or the "Billed to" party without prior written consent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill submitted to Shipper or the "Billed to" party and sent to:

CONSIGNED TO:

CES Environmental (Port Arthur) 2420 Gulfway Dr.

Port Arthur, TX 77640

CARRIER:

CES Environmental Services, Inc.

4904 Griggs Rd.

Houston, TX 77021

This is to certify that the product stated below are properly classified, described, packaged, marked and labeled and is in proper condition for transportation according to the applicable regulations of the Department of Transportation. If this Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state whether It is "carrier's or shipper's weight."

intermodal Certificate: All Information required by Federal Highway Administration regulations at 49 CFR 390.54© Implementing the Intermodal Safe Container Act of 1992 is set forth on the face of this bill of lading. The shipper name herein is the tendening party.

Yes	Va.	Туре	Quantity		Description of Materials, Special Marks, and Exceptions		
Yes '		.hha		WWVol			
,	1	TT I	4504	O P	UN 2924, Flammable liquid. Corrosive, n.o.s., 3, PG II		
			-				
I to see the seed	energy carriers	Agramatique y de su persamo	e en suite en se	Parameter (
Shippe	er; A	rkema), inc i	lousto			
Per :_(<u>G</u> 1	race	Dea	<u> </u>	Signature: Stac De Date: 7/17		
Carrier	r CE	S Env	ironmen	tal Ser	vices, Inc.	. Helio	
Per : K	Popol	ert f	fichn	191	Signature : fotal Suchum Date : 07-1	7-09	
Receivi	ing F	acilit	y CES	Enviror	nmental (Port Arthur)		
Per	John	estore	_Male	che	Signature : Suble: Date : 7/17/	109	

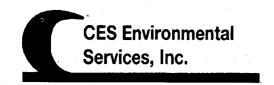
white (Generator Return Copy) Yellow (Transporter Copy)

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

WEIGHED ON A FAIRBANKS SCALE **CUSTOMER'S NAME** ADDRESS_ COMMODITY _ CARRIER LOOP R INBOUND 30340 1b INBOUND DATE 07-17-09 07-17-09 TIME 09:33 AM OUTBOUND DATE LOOP A 2 75380 lb GR 30340 lb TA 45040 lb NT OFF DRIVER ON **SHIPPER** WEIGHER **FAIRBANKS SCALE CAT. 16288**

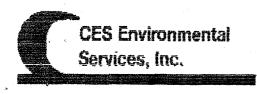
CUSTOMER'S NAME ADDRESS __ COMMODITY SPENT CARRIER ___ LOOP R 10 IMB0UND 30340 lb TIME 07-17-09 07:07 AM 07-17-09 TIME 09:33 AM INBOUND DATE OUTBOUND DATE LOOP A 2 75380 lb GR 30340 1b TA 45040 1b MT DRIVER ON WEIGHER **FAIRBANKS SCALE CAT. 16288**



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

Inbound Load Report

Job Number :	88871					
Type of Material:	Caustic					Marketine (1997) Marketine (1997)
Job Date:	7/17/2009					
Bill of Lading #:	88871					
Customer:			. ,			
customer:	Arkema, Inc Houst	.011				
				•		
Gross Weight:					•	
Tare Weight:		OR To	tal Gallons Shi	pped: 515	9	
Net Weight:	45040					
Shipping In	formation					
Carrier:	CES Environmental S	Services, Inc.				
Truck Number:	281	<u>,</u>				
Trailer Number:	234					
CES Laborato	ory Use Only	Misc	Notes:			
Specific Gravity:	1.047	% C	austic 5.08			
Pounds per Gallon	8.73					
Temperature:						
Total Gross Gallon	s: 5159					5
% Water						
% Solids	0					
Total Net Gallons:	5159					
(minus water and so	lids)		•	· ·		
2000年,1月1日 - 2000年 - 1月1日 - 1月1日 - 2000年 -	era o o o o o o o o o o o o o o o o o o o	symptotic or the approximation of	Angle of the Section	resident for the second	general Market Control of Control	Control of Special States (Special Special Spe
er en	e de la companya de	was a second				
Sample Analyst:			· · · · · · · · · · · · · · · · · · ·			en e
		ature)		D _1	7/27/2000	To see the differ
Sample Analyst:	Bo Cumberland		<u></u>	Date:	7/27/2009	and the second production is



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

Transportation Work Ticket

Folder ID : Arkema (Haden Rd) Caustic Management		
Date: 7/17/2009	Manifest # :	
Arkema, Inc Houston		
lient:	Ticket:	88871
Phone : 7134506770	Consignee :	CES Environmental (Port Arthur)
ransporter:	Signature	(Fale:
Leave CES Yard: 0700	Arrive At	Destination <u>1 み みら</u>
Arrive At Customer: 0730 \ 7	くん Begin Un	loading: 1345
Begin Loading: 0830	Finish Un	loading: <u>1415</u>
· · · · · · · · · · · · · · · · · · ·	47/	· · · · · · · · · · · · · · · · · · ·
Leave Customer: 1100 / 1	Leave De	CES Yard: 1700
Customer PD #:	tal Hours:	CES Unload:
Gross Weight: 75380	Ending C	Odometer: <u>136941</u>
Tare Weight: 30.340	Begining	Odometer : 136754
Net Weight: 45040	Total Mil	es: <u>187</u>
'Driver : Hickman, Robert	Tractor # : 293	Tote # :
gnature: Robert Wicking	Trailer # : <u>234</u>	Box # :
o Comments/Equipment :		
White (CES Office) Yellow (CES Office / F	Billing) Pink (CE)	S Office / IFTA) Golden Rod (Custome



JOB INFORMATION PROFILE

Folder ID :	Arkema (Hade Caustic Mana				
Customer	: Arkema, Inc.	- Houston	Driver : Hickman, R	obert	
Address	: <u>2231 Haden F</u>	<u>Road</u>		Helper:	
City,State,Zip	: Houston TX ,	<u>77015</u>		Date: 7/17/2009	Time: <u>0600</u>
CES Contact	:() -			Truck # 293	Trailer # 234
Job Desc	cription:				
BE ONSITE AT	8AM!				
1. Load caustic	as directed				
2. Haul load to l	PACES and che	eck in with lab			
you will need the 3/4" crows foot 3" camlock fitting no hoses neede take the following safety glasses steel-toe boots FRC's	on vent line ng not dry brake ed				
ID #: CUSTOME OPERATION HO	88871 ER INFORMATIO DURS:	N SHIPPING/RECEIVING	G CONTACT:	AFTER HOURS CO	NTACT:
Open :		Name:	Grace Dean	Name:	Same
Close:		Number:	(713) 450-6746	Number:	
RECEIVIN	IG INFORMATIO	V			
OPERATION HO	OURS:	SHIPPING/RECEIVING	G CONTACT:	AFTER HOURS CO	NTACT:
Open :		Name:	PACES	Name:	
Close:		Number:		Number:	
PURCHASE ORD	DER NUMBER REQ	UIRED: YE	S 🗌 NO		
;	IF YES, P.O. #:	A CIRA PERING DECEMBER PER PER CIRCULAR CO CIR. CO CIR. CO CIR. CO		A CONTRACTOR OF A CONTRACTOR O	
PPE REQUIRED:	✓ YES	NO	HACS	C REQUIRED: YES	✓ NO
IF YES, W	HAT? Corrosive	e	Marine Participal Performance and Augustian	IF YES, WHAT?	
CAN CUSTOMER	LOAD US:	YES NO		WASHOUT ANTICIPATED	YES V NO
ROPPER PUMP:		☐ YES ✓ NO		BOX LINER REQUIRED	☐ YES 🗸 NO
LOADING/UNL TRAILER T		☐ REAR ☐ BELLY ✓ DOES NOT MATTER			



4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676 COPY

Invoice

Date	Invoice #		
7/28/2009	57871		

Bill To:

Arkema, Inc.

Attn: Accounts Payable 2231 Haden Road Houston, TX 77015

		P.O. No.	Terms	Pro	oject
		4500394919	Net 30		
Quantity	Description	1	Manifest #	Rate	Amount
	7/16/08				
1	Transportation services by CES @ \$40	00.00 per load		400.00	400.00
0.25	Loading demurrage @ \$70.00 per hour 13.5% Fuel Surcharge	r .		70.00 56.36	17.50 56.36
4,958	Recycling of flammable liquid, corros carbon disulfide @ \$0.31 per gallon	BOL 88872	0.31	1,536.98	
	1% Compliance Fee			20.11	20.11
	CES Job#88872				
We appreci	ate your business!		Subtotal		\$2,030.95
	ent Policy: Any unpaid balances begining of lue will accrue a per annum interest rate of		Sales Tax (8.	25%)	\$0.00
	formalized contract.	· · · · · · · · · · · · · · · · · · ·	Total		\$2,030.95

CES Environmental Services, Inc.

Bill Of Lading #:

88872

			100	2871/		
Folder ID :	Arkema (Haden Rd Cauelic Manageme					
Original - Si	hipper Provided S	hort Form Straig	tht Bill of Ladin	g – Not Negotiable	– Domestic	

SHIPPED FROM:
Arkema, Inc. - Houston 11a) PA-2602
2231 Haden Road 11b)
Houston , TX 77015 11c)
(713) 450-6770 11c)

The property described below, in apparent good order, except as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which said carrier (life word carrier being understood throughout this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to carry to its unusual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for goods; it is not of itself a contract of carriage. It is mutually sorreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party a any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract between shipper and carrier or intermediary.

For payment, Charges to be billed to Shipper of the "Billed to" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed to Shipper or the "Billed to" party without prior written companied Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill submitted to Shipper or the "Billed to" party and sept to.

CONSIGNED TO: 705 CARRIER:

GES Environmental (Port Arthur) CES Environmental Services, Inc. 30

2420 Gulfway Dr. 4904 Griggs Rd.

For Arthur, TX 77640 9994 Houston, TX 77021

This is to certify that the product stated below are properly classified, described, packaged, marked and labeled and is in proper condition for transportation according to the applicabilities of the Department of Transportation at the Bill of Lading shall state whether this conditions of the Department of Transportation at the Bill of Lading shall state whether this conditions or shall be a shall state whether this condition of the Department of Transportation at the Bill of Lading shall state whether this condition are properly that the product stated below are properly classified and labeled and is in proper condition for transportation according to the

Intermodel Certificate: All Information required by Federal Edghway Administration regulations at 43 CFR 390.540 implementing the Intermodal Safe Container Act of 1992 is set forth on this title of hading. The shipper name neven is the tendening party.

iaz Contai		1	Description of Materials, Special Marks, and Exceptions		
Wo.	Type Quanti	ty WWVoi			
es 1	1143280	, P	UN 2924, Flammable liquid. Corrosiv	e, n.o.s., 3, PG II	
				100877	
				100 P P3	
				214	
ene i passi sanciare escriptoristes.	and the second s	Andreas Property of the Party o			
	man in 1990 and a second second	-20	Sinders 195		
	rkondo inc	26			
upper: A	Jev Jo	- Indipart	gnature: Mely for	5-407-14-69	
		73)	gnature : 2020 x	Date: 07-16-09	
rrier <u>C</u> E	S Environm	ental Service	s, Inc.		
	-) 0	a. C. C:	gnature: Keetan landur	Date: 07-16-09	
er: Yks	Ston JAN	36/2 31	Milling:	Date . OF	

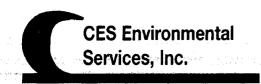
White (Generator Return Copy)

Yellow (Transporter Copy)

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

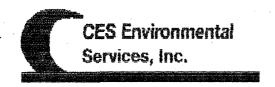
WEIGHED (ON A FAIRBANKS SCALE
CUSTOMER'S NA	ME
ADDRESS	
	SPENT Coustic
CARRIER	FS-234
	LOOP R 19 ID 0
	IMBOUND 32720 15
INBOUND DATE OUTBOUND DATE	TIME 07-16-09 07:20 AM 07-16-09 TIME 09:39 AM
4555 GS	LOOP R 19
	76000 15 GR 32720 15 TA 43280 15 MT
DRIVER ON	OFF
SHIPPER	
WEIGHER	Joy
	FAIRBANKS SCALE CAT. 16288
and the second s	and the second s



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

Inbound Load Report

Lab Marriagna	00070			
Job Number :	88872	— Tipo — Salaki ka kaban sabi ili		and the second s
Type of Material:	spent caustic	· · · · · · · · · · · · · · · · · · ·		
Job Date:	7/16/2009			
Bill of Lading #:	88872			
Customer:	Arkema, Inc Hous	ton	<u> </u>	
Gross Weight:				
Tare Weight:	· · · · · · · · · · · · · · · · · · ·	OR Total Galle	ons Shipped:	
Net Weight:	43280	OK Total Call		
Net Weight.	73200			
Shipping In	ormation			
Carrier:	CES Environmental	(Port Arthur)		
Truck Number:				
Trailer Number:	224			
		·		
CES Laborato	ry Use Only	Misc Notes:	·	
Specific Gravity:	1.047	Sulfides - 0.6		
Pounds per Gallon:	8.73	Mercaptanes NaOH - 5.084		
Temperature:		Carbonates -		
Total Gross Gallons	4958			
% Water				
% Solids				
Total Net Gallons:				
(minus water and sol	 lids)			
•				
Sample Analyst:				
	(sign	ature)		
Sample Analyst:	Unassigned	·	Date:7/	16/2009
			-	



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

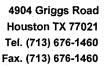
Transportation Work Ticket

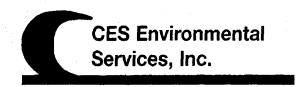
Arkema, Inc Houston Client: Ticket: 88872	Folder ID :	Arkema (Had Caustic Man				
CES Environmental Services, Inc. CES Environmental (Port Arthur) Consignee: CES Environmental (Port Arthur) Consignee: Signature Leave CES Yard: Arrive At Destination 1230 Begin Unloading: 140 Finish Unloading: 210 Finish Loading: 1021 Leave Destination: 215 Leave Customer: 1100 Arrive At CES Yard: 418 Customer PO #: CES Unload: Total Miles: 214 Driver: Cappillo Standard Tractor # 298 Total Miles: 214 Driver: Cappillo Standard Tractor # 298 Trailer #: 234 Box #:	Date: 7	/16/2009	ethe kantonykyyteistyttäistyttä ja talentainin ja kantonyk kalton terittää kirjoitainin kantonykyyteistyttiin	Manifest # :		
CES Environmental (Port Arthur) CES Environmental Services, Inc. CES Environmental Services, Inc. CES Environmental Services, Inc. CES Environmental (Port Arthur) Artive At Destination 1230 Ending Unloading: 140 CES Unloading: 170 C		irkema, Inc H	louston			
CES Environmental Services, Inc. Transporter: Signature Leave CES Yard: Arrive At Destination Arrive At Destination Arrive At Customer: 800 Begin Unloading: Finish Unloading: 100 Finish Loading: Leave Customer: 100 Total Hours: Customer PO #: Customer PO	Client:)	Ticket:		
CES Environmental Services, Inc. Firansporter: Signature Leave CES Yard: Arrive At Destination Arrive At Destination Arrive At Customer: 800 Begin Unloading: Finish Unloading: 100 Finish Loading: Leave Destination: Leave Destination: Leave Destination: Customer PO #: Cu	Phone: 7	134506770		Cancianao	CES Environmental (Port Arthur	r)
Leave CES Yard: 70S Arrive At Destination 1230 Arrive At Customer: 800 Begin Unloading: 140 Begin Loading: 904 She Finish Unloading: 210 Finish Loading: 1021 Leave Destination: 215 Leave Customer: 1100 Arrive At CES Yard: 415 Customer PO#: Total Hours: CES Unload: CES Unload: CES Unload: Driver: 43,280 Total Miles: 214 Driver: Carrillo Destroy Sanders Tractor # 2285 Tote #: gnature: Peston January Trailer #: 234 Box #:	-	:	onmental Services	, Inc.	•	*************
Arrive At Customer: 800 Begin Loading: 994 Finish Unloading: 210 Finish Loading: 1021 Leave Destination: 2/5 Leave Customer: 1100 Customer PO #: Total Hours: Customer PO #: Ending Odometer: 100 6 3 Net Weight: 43,280 Driver: Camillo Study Poston Anders Tractor # 2285 Total #: 234 Box #:	oguaune _	way y	7	Signature		
Begin Loading: 904 2 Finish Unloading: 210 Finish Loading: 4021 Leave Destination: 215 Leave Customer: 1100 Arrive At CES Yard: 415 Customer PO#: Total Hours: CES Unload: C			_			
Finish Loading: 1021 Leave Customer: 1100 Customer PO #: Cus	Begin Load	ina :	904	The Linion IIn	dandina: 917	
Customer PO #: Customer PO #: Customer PO #: Customer PO #: Ces Unload: Trailer #: 234 Begining Odometer: Loo b 63 Total Miles: Ces Unload: Trailer #: 234 Box #: Ces Unload:	-	_	1021			
Gross Weight: Ending Odometer:	ž		100/	Aurug Arrive At	CES Yard: 415	
Net Weight: Begining Odometer: 160 6 6 3 Net Weight: 43,280 Total Miles: 214 Driver:	<u>Customer l</u>	PO #:		Total Hours:		
Net Weight: 43,280 Total Miles: 214 Driver: Carrillo Rud Peston Sanders Tractor # 2788 Tote #: gnature: Peston Sanders Trailer #: 234 Box #:	Gross Weig	yht:		Ending O)dometer : <u> 103877</u>	
Driver: Carrillo, Rudy Poston Sanders Tractor # 2785 Tote #: gnature: Preston Sandare Trailer #: 234 Box #:	Tare Weigh	t:		Begining	Odometer : 100 6 63	-
gnature : Peston Sandon Trailer # : 234 Box # :	Net Weight	: 43,28	80	Total Mile	es: <u>214</u>	
	Driver : c	millo, filedy Pe	Ston Sanders	Tractor # 2288	Tote # :	:
Comments/Equipment:	gnature : L	eston Sar	day	Trailer # : 234	Box #:	
, commence and the second seco	n Commantell	auinmant :				
	o wommerks)L	a lang land 8 gad 6 6 6 5 Tail \$ Elib.	·	: 		·····
	·	·				
		evicestic content to a content				
					w.	
	A THE RESIDENCE AND A SECOND PROPERTY OF THE					
		ennimises services symmetry and system and continues to environ their managers and				·/*****
	the second bloody and the contract of the second se					



JOB INFORMATION PROFILE

Folder ID :	Arkema (Hade Caustic Manag				Sander	s Pres	ton
Customer	: Arkema, Inc	Houston		Driv	ver : Comillation	<u> </u>	
Address	: 2231 Haden R	<u>Road</u>		Help	oer:		
City,State,Zip	: Houston TX,	<u>77015</u>		Da	ate: <u>7/16/2009</u>	Time: <u>0600</u>	<u>)</u>
CES Contact	:()	()		Truc	k# 22295	Trailer # 234	<u>4</u>
Job Desc	ription:	<u> </u>					
BE ONSITE AT	*8AM!	programme in	الله المستخطية الله الله الله الله الله الله الله الل				
1. Load caustic	as directed						
2. Haul load to I	PACES and che	ck in with lab					
you will need the 3/4" crows foot 3" camlock fittin no hoses neede	on vent line ng not dry brake		\$ 				
take the following safety glasses steel-toe boots FRC's	ng:			·			
CUSTOME	88872 ER INFORMATION DURS:		EIVING CONTACT:		AFTER HOURS CO	NTACT:	
Open:		Name:	Grace Dea		Name:	Same	
Close:		Number:	(713) 450-67	/46	Number:		
RECEIVIN	IG INFORMATION						
OPERATION HO	OURS:	SHIPPING/REC	EIVING CONTACT:		AFTER HOURS COI	NTACT:	
Open:		Name:	PACES		Name:		
Close:		Number:			Number:		
PURCHASE ORD	ER NUMBER REQ	UIRED:	YES NO				
· <u>:</u>	IF YES, P.O. #:	D-1 - 100 -		ALL COMMON MANUFACTURE AS EXPRESSED AND CONTRACTOR OF A CONTRA	00040°-004-004703-4-0704-0708-72943-700-700-700-700-700-700-700-700-700-70		
PPE REQUIRED:		NO		HACSC REQUI	IRED:	-[7] NO	
IF YES, W	YES Corrosive	NO	City of			☑ NO	
CAN CUSTOMER	Marie and a second a second and	gggggggggggggggggggggggggggggggggggggg	And the second of the second o		WHAT?		
3 3	LUAD US :	YES V		WASHO	OUT ANTICIPATED	YES	✓ NO
ROPPER PUMP:		☐ YES 🗹 N	10	BOX LI	NER REQUIRED	YES	✓ NO
LOADING/UNL TRAILER T	YPF	☐ REAR ☐ E	BELLY ATTER				





Material / Product Approval Letter

Date 1/25/2008

Dear Grace Dean

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2602

Expiration Date 1/25/2010

Producer: Arkema, Inc.

Address: 2231 Haden Road

Houston, TX 77015

Material / Product Information

Name of Material / Product Recyclable caustic soda

Container Type:

Detailed Description of Process Generating or Producing the Material / Product:

Scrubber process

Color: Clear dark amber

Odor: strong

pH: 14

Physical State:

Incompatibilities: Reacts violently or explosively with water, acids, and organic

materials, carbon monoxide can from upon contact with food or

beverage products

Safety Related Data/Special Handling:

Where there is a potential for leye contact, wear a face shield, chemical goggles, and have eye flushing equipment available. Wear appropriate chemical resistant protective clothing and chem9ical resistant gloves to prevent skin contact. Avoid breathing

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

p.2

JAN-23-2008 13:11

CES Environmental Svcs.

JB





4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

Company:		<u>mation</u>			
	Arkema Inc.				
Address:	2231 Haden Rd.				
City, State, Zip:	Houston, TX 770	15			
Contact:	Grace Dean		Title:		
Phone Nor	(713) 450-6746		Fax No:		
24/hr Phone:	(800) 424 9300				
U.S. EPA I.D. No:	Tx0009090	<u>a[1</u>		Λ Λ	
State I.D.	30503		SIC Code:	NA	
	ng Information – 🗌	Same as Above			
Company:	Arkema Inc.				
Address:	2231 Haden Rd.				
City, State, Zip:	Houston, TX 77015				
Contact:	Brantley Moonyhan	n Title:			
Phone No:	(713)450-6746	Fax N	0:		
SECTION 3: Gene	ral Description of th	ne Majerial / Product			
	Product: <u>Recycleab</u> n of Process Genera	ole Caustic Soda ting or Producing the R	Material / Product: S	crubber process	
Physical State:	∠ Liquid ☐ Solid	Sludge Filter Cake	Powder Combination		
Color: <u>Clear dark an</u>	nber	Odor: <u>Strong</u>			
Specific Gravity (w	ater=1): <u>1.090</u>	Density: 9.08 lbs/ga	al		
Layers:	Single-please	Multi-pha	se		
Container Type:	Drum	☐ Tote	□ Truck	Other	(explain)
Container Size:		Photographic and	5000 gal		<u>.</u>
	671				er en gele ja
Frequency:	₩eekly	☐ Monthly	Quarterly	Yearl	y
Number of Units (co		Product	-		
Proper U.S. DOT SI	hipping Name:	UN 2924, Flam	mable Liquid, Corrosi	ve, n.o.s., 3, PG II	
	UNIN	IA: UN 2924	PG: PG	II	RQ: NaOH 1000#
Class: 3					
Flash Point	pH	N/A	N/A		olids
Class: 3 Flash Point 70 F⇒ 150 f Oil& Grease	pH 14 TOC	N/A Zinc	N/A Copper		olids %

CES Environmental Svcs.

7137488664

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE The material / product consists of the following materials	Concentration Ranges are acceptable	Units or %
Carbon Disulfide	<.1	%
Sodium Hydroxide	10-15	%
Water	85-90	%
	1911	

SECTION 5: Safety Related Data

If the handling of this material / product requires the use of special protective equipment, please explain. Where there is a potential for eye contact, weat a face shelld, chemical googles, and have eye flushing equipment available. Wear apporiate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Avoid breathing vapor or mist.

SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. **MSDS**

SECTION 7: Incompatibilities

Please list all Incompatibilities (if any):

Reacts voilently or explosively with water, acids and organic materials. carbon monoxide can form upon contact with food or beverage products.

SECTION 8: Material Producer's Certification

The information contained herein is based on \square generator knowled	ge and/or 🔀 analytical data. I hereby certify that the above and
attached description is complete and accurate to the best of my ki	nowledge and ability to determine that no deliberate or willful
omissions of composition properties exist and that all known or sus	pected hazards have been disclosed. I certify that the materials
tested are representative of all materials described by this document.	•
Authorized Signature: Land frequen	nu 1-24-08
Authorized Signatures I - Decel The second	0000 1- 64-00

SITE MANAGER

Process Facility Information: #.54/9 Al FSC 20%0 TRANS \$ 400/10Ad
Denserry Strath



Caustic Soda, Shipment Grade

Material Safety Data Sheet

Arkema Inc.

EMERGENCY PHONE NUMBERS:

1 PRODUCT AND COMPANY IDENTIFICATION

Thio and Fine Chemicals

Arkema Inc.

2000 Market Street

Philadelphia, PA 19103

Information Telephone Numbers

Phone Number

Available Hrs

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 767-5089 (24Hrs)

Customer Service

1-800-628-4453

8:30 to 5:30 EST

Product Name

Product Synonym(s)

Caustic Soda, Shipment Grade

Chemical Family

Alkali

Chemical Formula

NAOH Sodium Hydroxide

Chemical Name EPA Reg Num

Product Use

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name		CAS RegistryNumber	Typical %	OSHA	
Carbon disulfide		75-15-0	<0.1%	Υ	
Sodium hydroxide		1310-73-2	10-15%	Υ	
Water	,	7732-18-5	85-90%	N	

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

Orange slightly turbid liquid with foul odor.

DANGER!

FLAMMABLE LIQUID AND VAPOR.

CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE BLINDNESS.

CAUSES SEVERE DIGESTIVE TRACT BURNS.

EVEN DILUTE SOLUTIONS MAY CAUSE BURNS.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. This material is a strong alkali that can be destructive to tissue producing severe burns which are not immediately painful or visible. Contact with body tissues may produce deep ulceration, scarring or loss of sight. Concentrations as low as 2-3% can cause injury. Dermatitis (inflammation of the skin) and superficial skin damage can result from repeated or prolonged contact with very dilute solutions. High levels of dust or mist may be corrosive to mucous membranes producing eye or lung injury and chemical pneumonia. Lower concentrations may produce irritation of eyes, nose or upper respiratory tract with coughing, sore throat and shortness of breath. Prolonged exposure may result in ulceration of the nasal passages. If swallowed, this material may cause severe internal injury, characterized by pain in the mouth

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 1 of 7



Caustic Soda, Shipment Grade

Material Safety Data Sheet

Arkema Inc.

and stomach, vomiting, and breathing difficulties. Medical conditions which may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature

NE

Flash Point

70 F - >150 F

Flash Point Method

Flammable Limits- Upper

NE

Lower

NE

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

Contact with metal can form hydrogen gas. Hydrogen is extremely flammable and can form explosive mixtures with air. Closed containers may explode when heated or contents contaminated with water.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Contain, vacuum up, place in non-sparking container for disposal. Prevent waterway contamination. Construct a dike to prevent spreading. Collect runoff and transfer to drums or tanks for later disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. To avoid rapid temperature rise, violent spattering, or explosive eruptions: always add caustic to water when mixing. Never add water to a caustic when mixing. Heat water to 80-100 F before adding product. Add small amounts of product slowly and evenly over surface of water with constant stirring. Never increase concentration of product by more than 5% with any single

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 2 of 7



Caustic Soda, Shipment Grade

Material Safety Data Sheet

Arkema Inc.

7 HANDLING AND STORAGE

addition. Water should not exceed 160 F during addition.

Storage

Do NOT store near strong acids.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

Eve / Face Protection

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value	
Sodium hydroxide		; ;	
ACGIH CEILING	-	2 mg/m3	
OSHA TWA PEL	N=	2 mg/m3	
Carbon disulfide		· ·	
ACGIH Skin designator	į <u></u>	Υ	
ACGIH TWA	-	1 ppm	
OSHA Ceiling PEL	<u></u>	30 ppm	
OSHA TWA PEL		20 ppm	
-Only those components with exposur	e limits are printed in this section.	ţ.	

Only those components with exposure limits are printed in this section.

Product Code: 001938 Revision: 6 Issued:23 FEB 2007 Page 3 of 7

⁻Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

⁻ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

⁻WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.



Material Safety Data Sheet

Arkema inc.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor Orange slightly turbid liquid with foul odor.

NE

Specific Gravity 1.073 @ 15 C Vapor Pressure 30 @ 100 F

Vapor Density

MA

Melting Point

Freezing Point

Boiling Point

NE

Solubility In Water

NA

NE

99.98%

10 STABILITY AND REACTIVITY

Stability

Ηg

This material is chemically stable under normal and anticipated storage and handling conditions.

Incompatibility

Reacts violently or explosively with water, acids and organic materials such as chlorinated hydrocarbons. Toxic carbon monoxide gas can form upon contact with food or beverage products.

Hazardous Decomposition Products

Will react with some metals such as aluminum, tin or zinc to generate hydrogen gas. Hydrogen gas can result in explosive hazards in confined spaces,

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Single exposure (acute) studies indicate that this material is slightly toxic if absorbed through the skin (rat LD50 1,350 mg/kg; dry sodium hydroxide) and corrosive to rabbit eyes and skin. Many publications in the scientific literature confirm that this material is corrosive to all tissues. Repeated inhalation resulted in lung damage in rats. No tumors were seen in long-term animal studies. No genetic changes were observed in tests using bacteria.

No significant increases in mortality in relation to duration or intensity of exposures were reported in an epidemiologic study of a small group of workers exposed to caustic dust for 30 years or more. Massive ingestion of this material has been implicated as causing esophageal cancer. Squamous cell carcinomas of the esophagus occurred approximately 12-42 years later in individuals who survived accidental childhood ingestion and are likely due to the tissue destruction and possible scarring of the esophagus rather than a direct effect of this material.

Carbon Disulfide

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 3,188 mg/kg) or rabbits if absorbed through skin (LD50 2,025 mg/kg), practically non-toxic to rats if inhaled (1-hr LC50 40 mg/l), and severely irritating to rabbit skin and eyes. The neurological effects of long-term exposure have been documented in occupational populations who were generally exposed to levels of 20 ppm or more in viscose rayon production. Exposed workers have experienced headaches, nausea, dizziness, tiredness, memory loss, sleep disturbances, irritability and other psychological symptoms in the early stages of intoxication. Long-term exposure has resulted in decreased nerve conduction velocities, memory loss,

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 4 of 7



Material Safety Data Sheet

Arkema Inc.

11 TOXICOLOGICAL INFORMATION

peripheral neuropathy (numbness) in the lower legs and forearms, tremors, poor coordination and personality disorders. In addition, several studies have shown adverse effects on the heart including increases in atherosclerosis, death from coronary or ischemic heart disease and blood pressure. Other studies have indicated that long-term overexposure can cause adverse effects on the eyes including increased hemorrhages or microaneurysms of the retina. Studies of occupationally exposed workers have suggested that long-term exposure to higher levels may cause reproductive effects. Male workers had decreased libido, reduced sperm count and altered endocrine function and female workers reported menstrual irregularities. Sperm from exposed workers have shown alterations indicative of spermatogenic damage. There is conflicting evidence whether increased pregnancy complications and a higher frequency of spontaneous abortions are related to exposures in female workers.

Animal studies have confirmed neurological effects. Rats exposed for long periods to high levels showed decreased motor conduction velocity, hindlimb motor defects, peripheral nerve swelling and degeneration. Repeated exposure of monkeys has resulted in reduced visual acuity. Following inhalation exposure in male rats, minor reproductive effects such as decreased sperm counts and abnormal mating behavior, but no pathological changes were noted in testes. A two-generation reproduction study in exposed female rats showed no reduction in fertility, but mothers exposed to high dose levels had reduced pup viability. Multiple developmental toxicity studies in rats and rabbits have presented evidence of increased birth defects and embryotoxicity at high dose levels; however, exposures at levels that are not maternally toxic generally do not cause birth defects, although developmental effects have been observed. No genetic changes were observed in tests using bacteria, but have been observed in animal cells.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Data from several species of fish showed a range of tolerance (brook trout > spotfin and Lake Emerald shiners > minnows > mosquitofish > goldfish) that was most likely related to changes in the pH produced by addition of sodium hydroxide to the water. The minimum lethal concentration for minnows, Mayfly larvae and Daphnia was 100 ppm and for Chironomus larvae, 700 ppm.

Carbon Disulfide

This material is moderately toxic to Daphnia magna (LC50 2.1 mg/l). It is moderately toxic to guppies (LC50 4 mg/l) and slightly toxic to green algae (LC50 21 mg/l). It is practically non-toxic to mosquitofish (LC50 135 mg/l) and bacteria (LC50 341 mg/l).

Chemical Fate Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

No data were available, but this material is a strong alkali that easily dissolves in water with resulting acid/base chemistry.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 5 of 7



Material Safety Data Sheet

Arkema Inc.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual materials. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name

Flammable Liquid, Corrosive, NOS

DOT Technical Name

(Sodium Hydroxide; Carbon Disulfide)

DOT Hazard Class

3, 8

UN Number

UN 2924

DOT Packing Group RQ

PG II

Sodium Hydroxide 1000# (dry basis); Carbon Disulfide 100#

DOT Special Information

Subsidiary hazard: 8 Corrosive

On a waste manifest, add the word "Waste"

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health Y

Fire

Υ.

Delayed (Chronic) Health N

Reactive

N N

Sudden Release of Pressure

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

CERCLA RQ

SARA TPQ

Sodium hydroxide

1000 LBS

Water

NE

Carbon disulfide

100 LBS

10000 LBS

SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Carbon disulfide

SARA Title III, Section 302

This product does contain chemical(s), as indicated below, currently on the Extremly Hazardous Substance List, Section 302, SARA Title III. See Section 2 for further details regarding concentrations and registry numbers.

Carbon disulfide

California Prop 65 - Developmental Toxin

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins. Carbon disulfide

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 6 of 7



Material Safety Data Sheet

Arkema Inc.

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Carbon disulfide

Sodium hydroxide

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Carbon disulfide

Sodium hydroxide

16 OTHER INFORMATION

Revision Information

Revision Date

23 FEB 2007

Revision Number 6

Supercedes Revision Dated

07-NOV-2006

Revision Summary

Moved from Retired to Active 03.

Kev

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Miscellaneous

NOTE: Toxic carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and cause death.

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 7 of 7

TRACK WORI	(SCHEDO			Date:	11/5/2007		
TRACK #3 (21745)	Т	RACK #2 (2174	4)	<u> </u>	TRACK #1	(21743	3)
CAR #	Spot #1 Car # UTLX 90		Load	Spot #	t1 utlx 901317 IP		unload
	NDM	Wt.	20 MG		ndm	Wt.	
	Lot# Spot #2	vvt.		Lot# Spot #	22	vvt.	
	Car#				UTLX 901320		load
	Lot#	Wt.		 		Wt.	
	Spot #3 Car # GATX 8	1893		Spot #	3 CPCX 206121		
	TETRAMI	ER Wt.	30 мG 184,954	Lot#	DODECENE	Wt.	30 MG 175,350
	Car#	VV	104,354	Spot #	4	VVI.	173,330
	F	PURGE/REPAIR	ONLY	,	PURGE/R	EPAIR	ONLY
	Lot#	Wt.	·	Lot#		Wt.	·
	Spot #5 Car #			Spot #	5	-	
	; F	PURGE/REPAIR	ONLY	;	PURGE/R	EPAIR	ONLY
	Lot#	Wt.		Lot#		Wt.	
	Spot #6 Car #			Spot #6		-	
	PURG	SE ONLY			PURGE ONLY	,	
plant: Control Room:	713-450-5870 or	713-450-5887		LEAD			
MERGENCY CONTAC nmes Wheeland - Pag race Dean - Cell: 713-	er: 888-487-5997	/ Cell: 713-304	-7037	3			

RACK WORK	SCHEDULE		Date: 11/5/2007	
TRACK #3 (21745)	TRACK	#2 (21744)	TRA	ACK #1 (21743)
CAR#	Spot #1 Car # UTLX 901311 IP NDM	Load 20 MC	IP	
	Lot#	Wt.	Lot#	Wt.
· · · · · · · · · · · · · · · · · · ·	Spot #2 Car #		Spot #2 Car # UTLX 901)
	Lot#	Wt.	Lot#	Wt
	Spot #3 Car # GATX 81893		Spot #3 Car # CPCX 20	06121
	TETRAMER Lot#	30 MG Wt. 184,9	The state of the s	NE 30 MG Wt. 175,350
	Car#	:/REPAIR ONLY	Spot #4 Car #	JRGE/REPAIR ONLY
	:	Wt.	L'ot#	Wt.
	Lot# Spot #5 Car #	_	Spot #5 Car #	
		REPAIR ONLY	2	JRGE/REPAIR ONLY
	Lot# Spot #6 Car #	Wt	Lot# Spot #6 Car # ²	Wt.
	PURGE ON	LY	, i PURG	E ONLY
plant: Control Room:	713-450-5870 or 713-45	0-5887	LEAD	
ERGENCY CONTAC nes Wheeland - Pag nce Dean - Cell: 713-	er: 888-487-5997 / Cell:	713-304-7037	3	



Material Safety Data Sheet

Arkema Inc.

1 PRODUCT AND COMPANY IDENTIFICATION

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Arkema Inc.

2000 Market Street

Philadelphia, PA 19103

Information Telephone Numbers

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 767-5089 (24Hrs)

phone Numbers Phone Number

Available Hrs

Customer Service

1-800-628-4453

8:30 to 5:30 EST

Product Name

Caustic Soda, Shipment Grade

Product Synonym(s)

Chemical Family

Alkali

Chemical Formula

NAOH

Chemical Name

Sodium Hydroxide

EPA Reg Num Product Use

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Carbon disulfide	75-15-0	<0.1%	Υ
Sodium hydroxide	1310-73-2	10-15%	Υ
Water	7732-18-5	85-90%	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

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CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE BLINDNESS.

CAUSES SEVERE DIGESTIVE TRACT BURNS.

EVEN DILUTE SOLUTIONS MAY CAUSE BURNS.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. This material is a strong alkali that can be destructive to tissue producing severe burns which are not immediately painful or visible. Contact with body tissues may produce deep ulceration, scarring or loss of sight. Concentrations as low as 2-3% can cause injury. Dermatitis (inflammation of the skin) and superficial skin damage can result from repeated or prolonged contact with very dilute solutions. High levels of dust or mist may be corrosive to mucous membranes producing eye or lung injury and chemical pneumonia. Lower concentrations may produce irritation of eyes, nose or upper respiratory tract with coughing, sore throat and shortness of breath. Prolonged exposure may result in ulceration of the nasal passages. If swallowed, this material may cause severe internal injury, characterized by pain in the mouth

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 1 of 7



Material Safety Data Sheet

Arkema Inc.

and stomach, vomiting, and breathing difficulties. Medical conditions which may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature

NE

Flash Point

70 F - >150 F

Flash Point Method

Flammable Limits- Upper

NE

Lower

ΝE

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

Contact with metal can form hydrogen gas. Hydrogen is extremely flammable and can form explosive mixtures with air. Closed containers may explode when heated or contents contaminated with water.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Contain, vacuum up, place in non-sparking container for disposal. Prevent waterway contamination. Construct a dike to prevent spreading. Collect runoff and transfer to drums or tanks for later disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. To avoid rapid temperature rise, violent spattering, or explosive eruptions: always add caustic to water when mixing. Never add water to a caustic when mixing. Heat water to 80-100 F before adding product. Add small amounts of product slowly and evenly over surface of water with constant stirring. Never increase concentration of product by more than 5% with any single

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 2 of 7



Material Safety Data Sheet

Arkema Inc.

7 HANDLING AND STORAGE

addition. Water should not exceed 160 F during addition.

Storage

Do NOT store near strong acids.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

Eye / Face Protection

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit	,*	Value
Sodium hydroxide		,
ACGIH CEILING	-	2 mg/m3
OSHA TWA PEL	." -	2 mg/m3
Carbon disulfide	ş.	· ·
ACGIH Skin designator	, -	\mathbf{Y}_{γ}
ACGIH TWA	-	1 ppm
OSHA Ceiling PEL	-	30 ppm
OSHA TWA PEL	₹ ['] . -	20 ppm

⁻Only those components with exposure limits are printed in this section.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 3 of 7

⁻Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

⁻ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.



Material Safety Data Sheet

Arkema Inc.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor

Orange slightly turbid liquid with foul odor.

рΗ

NE

Specific Gravity

1.073 @ 15 C

Vapor Pressure

30 @ 100 F

Vapor Density Melting Point NA NA

Freezing Point

NE

Boiling Point

ŇE

Solubility In Water

99.98%

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Incompatibility

Reacts violently or explosively with water, acids and organic materials such as chlorinated hydrocarbons. Toxic carbon monoxide gas can form upon contact with food or beverage products.

Hazardous Decomposition Products

Will react with some metals such as aluminum, tin or zinc to generate hydrogen gas. Hydrogen gas can result in explosive hazards in confined spaces.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Single exposure (acute) studies indicate that this material is slightly toxic if absorbed through the skin (rat LD50 1,350 mg/kg; dry sodium hydroxide) and corrosive to rabbit eyes and skin. Many publications in the scientific literature confirm that this material is corrosive to all tissues. Repeated inhalation resulted in lung damage in rats. No tumors were seen in long-term animal studies. No genetic changes were observed in tests using bacteria.

No significant increases in mortality in relation to duration or intensity of exposures were reported in an epidemiologic study of a small group of workers exposed to caustic dust for 30 years or more. Massive ingestion of this material has been implicated as causing esophageal cancer. Squamous cell carcinomas of the esophagus occurred approximately 12-42 years later in individuals who survived accidental childhood ingestion and are likely due to the tissue destruction and possible scarring of the esophagus rather than a direct effect of this material.

Carbon Disulfide

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 3,188 mg/kg) or rabbits if absorbed through skin (LD50 2,025 mg/kg), practically non-toxic to rats if inhaled (1-hr LC50 40 mg/l), and severely irritating to rabbit skin and eyes. The neurological effects of long-term exposure have been documented in occupational populations who were generally exposed to levels of 20 ppm or more in viscose rayon production. Exposed workers have experienced headaches, nausea, dizziness, tiredness, memory loss, sleep disturbances, irritability and other psychological symptoms in the early stages of intoxication. Long-term exposure has resulted in decreased nerve conduction velocities, memory loss,

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Material Safety Data Sheet

Arkema Inc.

11 TOXICOLOGICAL INFORMATION

peripheral neuropathy (numbness) in the lower legs and forearms, tremors, poor coordination and personality disorders. In addition, several studies have shown adverse effects on the heart including increases in atherosclerosis, death from coronary or ischemic heart disease and blood pressure. Other studies have indicated that long-term overexposure can cause adverse effects on the eyes including increased hemorrhages or microaneurysms of the retina. Studies of occupationally exposed workers have suggested that long-term exposure to higher levels may cause reproductive effects. Male workers had decreased libido, reduced sperm count and altered endocrine function and female workers reported menstrual irregularities. Sperm from exposed workers have shown alterations indicative of spermatogenic damage. There is conflicting evidence whether increased pregnancy complications and a higher frequency of spontaneous abortions are related to exposures in female workers.

Animal studies have confirmed neurological effects. Rats exposed for long periods to high levels showed decreased motor conduction velocity, hindlimb motor defects, peripheral nerve swelling and degeneration. Repeated exposure of monkeys has resulted in reduced visual acuity. Following inhalation exposure in male rats, minor reproductive effects such as decreased sperm counts and abnormal mating behavior, but no pathological changes were noted in testes. A two-generation reproduction study in exposed female rats showed no reduction in fertility, but mothers exposed to high dose levels had reduced pup viability. Multiple developmental toxicity studies in rats and rabbits have presented evidence of increased birth defects and embryotoxicity at high dose levels; however, exposures at levels that are not maternally toxic generally do not cause birth defects, although developmental effects have been observed. No genetic changes were observed in tests using bacteria, but have been observed in animal cells.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Data from several species of fish showed a range of tolerance (brook trout > spotfin and Lake Emerald shiners > minnows > mosquitofish > goldfish) that was most likely related to changes in the pH produced by addition of sodium hydroxide to the water. The minimum lethal concentration for minnows, Mayfly larvae and Daphnia was 100 ppm and for Chironomus larvae, 700 ppm.

Carbon Disulfide

This material is moderately toxic to Daphnia magna (LC50 2.1 mg/l). It is moderately toxic to guppies (LC50 4 mg/l) and slightly toxic to green algae (LC50 21 mg/l). It is practically non-toxic to mosquitofish (LC50 135 mg/l) and bacteria (LC50 341 mg/l).

Chemical Fate Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

No data were available, but this material is a strong alkali that easily dissolves in water with resulting acid/base chemistry.

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Arkema Inc.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual materials. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name Flammable Liquid, Corrosive, NOS

DOT Technical Name (Sodium Hydroxide; Carbon Disulfide)

DOT Hazard Class 3, 8
UN Number UN 2924
DOT Packing Group PG II

RQ Sodium Hydroxide 1000# (dry basis); Carbon

Disulfide 100#

DOT Special Information Subsidiary hazard: 8 Corrosive

On a waste manifest, add the word "Waste",

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health Y Fire Y

Delayed (Chronic) Health N Reactive N

Sudden Release of Pressure N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities CERCLA RQ SARA TPQ

Sodium hydroxide 1000 LBS

Water NE

Carbon disulfide 100 LBS 10000 LBS

SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Carbon disulfide

SARA Title III. Section 302

This product does contain chemical(s), as indicated below, currently on the Extremly Hazardous Substance List, Section 302, SARA Title III. See Section 2 for further details regarding concentrations and registry numbers.

Carbon disulfide

California Prop 65 - Developmental Toxin

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins. Carbon disulfide

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

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Material Safety Data Sheet

Arkema Inc.

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Carbon disulfide

Sodium hydroxide

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Carbon disulfide

Sodium hydroxide

16 OTHER INFORMATION

Revision Information

Revision Date

23 FEB 2007

Revision Number 6

Supercedes Revision Dated

07-NOV-2006

Revision Summary

Moved from Retired to Active 03.

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Miscellaneous

NOTE: Toxic carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and cause death.

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

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Service Agreement: Arkema - Caustic

Dec 2007



This document confirms the service agreement between CES Environmental Services, Inc. ("Service Provider"), and Arkema Chemicals, Inc., ("Customer"), collectively "Parties". Customer agrees to produce and CES agrees to receive and accept spent caustic from production processes at Customer facility.

A. Customer:

Arkema Chemicals, Inc

2231 Haden Rd.

Houston, Texas 77015

B. Service Provider:

CES Environmental Services, Inc.

4904 Griggs Rd.

Houston, Texas 77021

- C. Effective Date: The effective date of the agreement is December 15, 2007.
- D. **Term:** The term of this agreement is One (1) year. Upon written agreement of both parties (including e-mail), this agreement may be extended for additional one year terms. After initial term, Parties may re-negotiate pricing with 90 days written notice.
- E. Scope of Service: CES will provide transportation & product management of Customer's spent caustic generated from scrubbing carbon disulfide with virgin caustic. Other spent caustic streams generated outside of this process require prior written approval by CES. CES will manage the spent caustic as a product in accordance with RCRA part 261.2(e)(1)(ii). CES will provide the profile, bill of lading, labels, and appropriate shipping documents.
- F. Use of Product: The product will be used as a direct substitute for other commercially available products.
- G. **Volume:** The estimated volume of spent caustic incorporated in this agreement is 150,000 gal per year and represents the entire production from Customer's Haden Road location in Houston, Texas.
- H. Specifications: See Exhibit A
- I. **Terms of Payment:** Customer agrees to pay CES undisputed services fees within thirty (30) days after the receipt of a valid, complete and properly documented invoice (bill of lading, weight ticket, and other supporting documents on each load).
- J. Price:
 - 1) Product management fee is \$0.54 per gallon when material is in accordance with specifications in Exhibit A.

- 2) Transportation: CES will arrange transportation from Customer facility at 2231 Haden Road, Houston, TX 77015. Upon completion of tanker truck unloading into CES designated equipment, title shall pass from Customer to CES. Parties agree to a load/transportation fee of \$400 per load includes two (2) hours of load time. Additional loading time (demurrage fee) is \$70 per hour.
- 3) Load Quantity: Parties agree to use API gravity adjusted tanker truck weight tickets to determine the quantity of product for each load.
- 4) Additional Surcharges:
 - a. Base management fee includes solids up to 1%. Parties agree that management fee increases \$0.01/gallon per percentage of solids above 1%.
 - b. Transportation pricing is subject to a fuel surcharge based on the current market value of motor fuel. As of the date of this document the fuel surcharge rate is 20%.
- K. Compliance with Laws: Parties agree to comply with all requirements of federal, state, and local laws, rules, regulations, and ordinances applicable to the handling, transportation, storage, and end use of the caustic material.
- L. **MSDS:** Customer represents that it has provided or will provide CES with current Material Safety Data Sheets (MSDS), labels, and any updated information for the product in accordance with the applicable requirements of the Occupational Safety and Health Administration (OSHA) at or prior to the time of delivery.
- M. Force Majeure: Neither Party is liable in damages or otherwise for failure or delay in performance of any obligation hereunder other than the obligation to make payment, where such failure or delay is caused by Force Majeure, being any event, occurrence or circumstance reasonably beyond the control of that party, including without prejudice to the generality of the foregoing, failure or delay caused by or resulting from Acts of God, strikes or other labor disputes (whether or not either Party is a party thereto or would be able to influence or procure the settlement thereof), fires, floods, wars (whether declared or undeclared), riots, destruction of the oil, delays of carriers due to breakdowns or adverse weather, perils of the seas, embargoes, accidents, disruptions or breakdowns of production, storage, pipeline, transportation or other refinery facilities, installations or machinery repairs, alterations, enlargements, or connections thereto or otherwise, restrictions imposed by any governmental authority (including allocations, priorities, requisitions, quotas, and price controls and environmental restrictions), inability to obtain necessary materials, supplies or permits. Parties agree to a 30-day extension for delivery of product or provision of service if delay is caused by any of the foregoing causes. In the event that delay extends beyond this 30-day period, either party may terminate this contract with written notice to the other Party.
- N. Indemnification: Each party shall indemnify and hold the other party and each of its directors, officers, employees and agents free and harmless from all claims, liabilities,

the prior written consent of the other party. Neither party shall disclose any confidential and proprietary data obtained throughout the provision of Services.

- R. Standard Terms and Condition of Service: See Exhibit B.
- S. Counterparts: This Agreement may be executed in two or more counterparts; each of which shall be considered an original hereof but which together shall be and constitute one in the same instrument and agreement.
- T. Order of Precedence: In the event of conflict between agreement documents, Parties agree to the following order of precedence: this document, Exhibit A, Exhibit B.

The parties have executed this Agreement the day and year first above written.

Arkema Chemicals, Inc.
By: Well R. Juley
Title: PLANT MANAGER_
CES Environmental Services, Inc.
By: Son Baker
Title: / Key Account Manager

EXHIBIT A
SPENT CAUSTIC PRODUCT GENERAL SPECIFICATIONS

Specification	Typical	Min	Max
% NaOH	4%	2%	-
Solids	none	-	1%
Hydrocarbon	none	-	sheen
Potassium	N/A	-	200 ppm
Chloride	N/A	-	5,000 ppm
Total Organic Carbon (TOC)	N/A	-	15,000 ppm
рH	13	12	14

EXHIBIT B

STANDARD TERMS AND CONDITIONS OF SERVICE

- 1. Service Provider shall give Customer reasonable notice covering shipments and Customer shall not be required to deliver in any month more than the monthly quantity herein specified, or if no monthly quantity is specified, more than the pro rata amount of the maximum quantity provided for. In the event of failure of Service Provider to take the stipulated or minimum pro rata quantity in any month, the deliveries or parts thereof not taken may, at Customer's option, be cancelled or included in subsequent deliveries. Customer shall not be bound to tender delivery of any quantities for which Service Provider has not given shipping instructions. Upon termination or expiration of this contract, Customer may within 30 days ship any previously undelivered quantity hereunder not reduced pursuant to the terms hereof. Upon delivery by Customer of product purchased hereunder to a common carrier or other carrier vehicle ("Delivery"), the Service Provider assumes the entire risk of damage to or loss of any products (shipped under order) from any cause; also the risk of delay in transportation and/or delivery, as well as all other risks of any kind, regardless of the form of bill of lading, and irrespective of i) whether title to such products has passed or ii) the F.O.B. point specified herein.
- 2. Each delivery shall stand as a separate contract and the failure of any delivery shall not be deemed a breach of the contract as to others.
- 3. No liability shall result from delay in performance or non performance in whole or in part if performance as agreed as been made impracticable by compliance in good faith with any applicable foreign or domestic governmental regulation or order whether or not it later proves to be invalid, or by the occurrence of a contingency the nonoccurrence of which was a basic assumption on which this contract was made, including, but not limited to acts of God, fire, flood, accident, riot, war, sabotage, strike, labor trouble or shortage, breakdown or failure of equipment or embargo. Customer's i) inability to obtain at prices and on terms deemed by it to be practicable any required raw material, energy source, equipment, labor, or transportation or ii) incurring increased costs for compliance with environmental protection, health or safety regulations shall also be sufficient to relieve Customer of its obligation to perform hereunder. If any such circumstances affect only a part of Customer's capacity to perform, Customer shall have the right to allocate production and deliveries among all of its customers and its own requirements in a manner and at such times as Customer may determine. Quantities affected by this paragraph may, at the option of either party, be eliminated from the contract without liability, but the contract shall remain otherwise unaffected.
- 4. The prices shall be paid in United States currency. Parties reserves the right, among other remedies, either to cancel this contract or to suspend further activity under it in the event the other Party fails to pay for any one shipment when payment becomes due. Should either Party's financial responsibility become unsatisfactory to the other Party, cash payments or satisfactory security may be required of the Party that fails to meet payment obligations under this agreement. Payment shall be net thirty (30) days from date of invoice.
- 5. Customer warrants title to the product sold hereunder, that at the time of delivery to a common carrier or other carrier or vehicle for shipment to Service Provider it conforms to Customer's specifications and that the service or use will not infringe the claims of any U.S. patent covering the product itself. Customer does not warrant against infringement which might arise by the use of said product in any combination with other products or arising in the operation of any Service Providers. If the product fails to meet said warranties, Customer shall replace the nonconforming product at no cost to Service Provider. The foregoing is Service Provider's sole and exclusive remedy for failure of Customer to deliver or supply product that meets foregoing warranties CUSTOMER MAKES NO OTHER WARRANTY OR ANY KIND EXPRESS OR IMPLIED INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNES OF THE PRODUCT FOR ANY PARTICULAR PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO THE CUSTOMER. ANY APPLICATION INFORMATION OR ASSISTANCE WHICH CUSTOMER MAY FURNISH TO SERVICE PROVIDER IS GRATUITIOUS AND SHALL IN NO WAY BE DEEMED PART OF THE SERVICE OF PRODUCT HEREUNDER OR A WARRANTY OF THE RESULTS OBTAINED THROUGH USE OF SUCH PRODUCT.
- 6. Customer's liability with respect to this contract and the products purchased under it shall not exceed the purchase price of the portion of such product as to which liability arises and Customer shall not be liable for any injury, loss or damage, resulting from the handling or sue of the product shipped hereunder whether in the manufacturing process or otherwise. In no event shall Customer be liable for special, incidental or consequential damages, including, but not

- limited to, loss of profits, capital or business opportunity; downtime costs; or claims of customers of Service Provider. Failure to giver Customer notice of any claim within 30 days of delivery of the product concerned shall constitute a waiver of such claim by Service Provider. Notwithstanding any applicable statute of limitations to the contrary, any action by Service Provider relating to a claim hereunder must be instituted no later than two (2) years after the occurrence of the event upon which the claim is based. All of the foregoing limitations shall apply irrespective of whether Service Provider's claims based upon breach of contract, breach of warranty, negligence, strict liability, or any other legal theory.
- 7. Service Provider agrees to indemnify, defend and hold Customer harmless from and against that portion of any liability, cost, expense (including reasonable attorneys' fees), claim, judgment, settlement or damage that Customer may incur or be required to pay to any third party (including, but not limited to, any employee of Service Provider who alleges or proves that he or she has been injured in the course of his or her employment while working with the products supplied by the Customer under this agreement), which is caused or contributed to buy the negligence or fault of Service Provider. In case the Service Provider resells the products supplied by the Customer under this agreement, Service Provider will request and use reasonable efforts to obtain from its purchaser an indemnification similar to the foregoing for the benefit of Service Provider and Customer.
- 8. Liability for all taxes, excises or other charges, imposed by any local, state or federal authority, which have to do with or affect the goods herein ordered (except those based on the income of Customer), shall be assumed and paid by Service Provider. Service Provider further agrees to indemnify and protect Customer against any and all such liabilities for taxes as well as any legal fees or costs incurred by Customer in connection therewith.
- 9. Customer's measurements shall govern, except in case of proven error.
- 10. This agreement constitutes the entire contract of service and purchase of the product herein named. It is not assignable by Service Provider without the written consent of Customer. No modification of this contract shall be of any force or effect unless in writing signed by the parties and no modification shall be effected by the acknowledgement or acceptance of purchase order forms containing different terms or conditions. If any provision of the contract is or becomes violative of any laws, or rule, order or regulation issued thereunder, Customer shall have the right, upon notice to Service Provider, to cancel such provision, without affecting the other provisions of this contract, or to cancel this contract in its entirety.
- 11. Upon delivery, Service Provider assumes full responsibility and liability for compliance with federal, state, and local regulations governing unloading, discharge, storage, handling and use of the product supplied by Customer under this contract
- 12. Returnable containers although loaned to Service Provider, remain the property of Customer and will be returned to Customer in good condition, f.o.b. Customer's shipping point, unless otherwise specified, within ninety (90) days from the date of shipment. When returnable containers are billed on the invoice, Service Provider agrees pay such deposit upon receipt of containers in good condition within ninety (90) days from the date of shipment. When containers are billed on memorandum charge, Service Provider agrees to reimburse Customer immediately at Customer's current deposit charge if containers are lost, damaged, or not returned within ninety (90) days of shipment. The phrase "returnable containers" as used in this paragraph does not include rail tank cars, the rental of which is governed by Customer's standard form of Tank Car Lease and Customer's current Tank Car Leasing policy.
- 13. Waiver by Customer of any breach of these conditions shall not be construed as a waiver of any other breach.
- 14. This contract shall be governed by and construed in accordance with the laws of the commonwealth of Pennsylvania. Any lawsuit brought by Service Provider arising out of the transactions covered hereunder shall be instituted in the appropriate state or federal court located in Philadelphia County, Pennsylvania and Service Provider further submits itself to the jurisdiction of said courts in the event Customer elects to institute any action in said courts.
- 15. All management of products are limited to and made expressly conditional on Service Provider's acceptance of the foregoing terms and conditions. Customer expressly objects to and rejects any terms and conditions that may be proposed by Service Provider which are in addition to or differ from the foregoing terms and condition.



Material Safety Data Sheet

Arkema Inc.

1 PRODUCT AND COMPANY IDENTIFICATION

Thio and Fine Chemicals

Arkema Inc.

2000 Market Street

Philadelphia, PA 19103

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 767-5089 (24Hrs)

Information Telephone Numbers

Phone Number

Available Hrs

Customer Service

1-800-628-4453

8:30 to 5:30 EST

Product Name

Caustic Soda, Shipment Grade

Product Synonym(s)

Chemical Family

Chemical Formula

Alkali NAOH

Chemical Name

EPA Reg Num Product Use

Sodium Hydroxide

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Carbon disulfide	75-15-0	<0.1%	Υ
Sodium hydroxide	1310-73-2	10-15%	Υ
Water	7732-18-5	85-90%	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

Orange slightly turbid liquid with foul odor.

DANGER!

FLAMMABLE LIQUID AND VAPOR.

CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE BLINDNESS.

CAUSES SEVERE DIGESTIVE TRACT BURNS.

EVEN DILUTE SOLUTIONS MAY CAUSE BURNS.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. This material is a strong alkali that can be destructive to tissue producing severe burns which are not immediately painful or visible. Contact with body tissues may produce deep ulceration, scarring or loss of sight. Concentrations as low as 2-3% can cause injury. Dermatitis (inflammation of the skin) and superficial skin damage can result from repeated or prolonged contact with very dilute solutions. High levels of dust or mist may be corrosive to mucous membranes producing eye or lung injury and chemical pneumonia. Lower concentrations may produce irritation of eyes, nose or upper respiratory tract with coughing, sore throat and shortness of breath. Prolonged exposure may result in ulceration of the nasal passages. If swallowed, this material may cause severe internal injury, characterized by pain in the mouth-

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Arkema Inc.

and stomach, vomiting, and breathing difficulties. Medical conditions which may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature

NE

Flash Point

70 F - >150 F

Flash Point Method

Flammable Limits- Upper

ΝE

Lower

NE

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

Contact with metal can form hydrogen gas. Hydrogen is extremely flammable and can form explosive mixtures with air. Closed containers may explode when heated or contents contaminated with water.

6 ACCIDENTAL RELEASE MEASURES

in Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Contain, vacuum up, place in non-sparking container for disposal. Prevent waterway contamination. Construct a dike to prevent spreading. Collect runoff and transfer to drums or tanks for later disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. To avoid rapid temperature rise, violent spattering, or explosive eruptions: always add caustic to water when mixing. Never add water to a caustic when mixing. Heat water to 80-100 F before adding product. Add small amounts of product slowly and evenly over surface of water with constant stirring. Never increase concentration of product by more than 5% with any single

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Material Safety Data Sheet

Arkema Inc.

7 HANDLING AND STORAGE

addition. Water should not exceed 160 F during addition.

Storage

Do NOT store near strong acids.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

Eye / Face Protection

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value	
Sodium hydroxide			
ACGIH CEILING	-	2 mg/m3	• .
OSHA TWA PEL	•	2 mg/m3	
Carbon disulfide	•		
ACGIH Skin designator	-	Υ	
ACGIH TWA	-	1 ppm	
OSHA Ceiling PEL	•	30 ppm	
OSHA TWA PEL	-	20 ppm	
Only those components with synasy	ra limita ara printad in this agatian		

⁻Only those components with exposure limits are printed in this section.

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⁻Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

⁻ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

⁻WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.



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Arkema Inc.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor

Orange slightly turbid liquid with foul odor.

рΗ

ΝE

Specific Gravity

1.073 @ 15 C

Vapor Pressure

30 @ 100 F

Vapor Density Melting Point Freezing Point NA NA

Boiling Point

NE NE

Solubility In Water 99.98%

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Incompatibility

Reacts violently or explosively with water, acids and organic materials such as chlorinated hydrocarbons. Toxic carbon monoxide gas can form upon contact with food or beverage products.

Hazardous Decomposition Products

Will react with some metals such as aluminum, tin or zinc to generate hydrogen gas. Hydrogen gas can result in explosive hazards in confined spaces.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Single exposure (acute) studies indicate that this material is slightly toxic if absorbed through the skin (rat LD50 1,350 mg/kg; dry sodium hydroxide) and corrosive to rabbit eyes and skin. Many publications in the scientific literature confirm that this material is corrosive to all tissues. Repeated inhalation resulted in lung damage in rats. No tumors were seen in long-term animal studies. No genetic changes were observed in tests using bacteria.

No significant increases in mortality in relation to duration or intensity of exposures were reported in an epidemiologic study of a small group of workers exposed to caustic dust for 30 years or more. Massive ingestion of this material has been implicated as causing esophageal cancer. Squamous cell carcinomas of the esophagus occurred approximately 12-42 years later in individuals who survived accidental childhood ingestion and are likely due to the tissue destruction and possible scarring of the esophagus rather than a direct effect of this material.

Carbon Disulfide

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 3,188 mg/kg) or rabbits if absorbed through skin (LD50 2,025 mg/kg), practically non-toxic to rats if inhaled (1-hr LC50 40 mg/l), and severely irritating to rabbit skin and eyes. The neurological effects of long-term exposure have been documented in occupational populations who were generally exposed to levels of 20 ppm or more in viscose rayon production. Exposed workers have experienced headaches, nausea, dizziness, tiredness, memory loss, sleep disturbances, irritability and other psychological symptoms in the early stages of intoxication. Long-term exposure has resulted in decreased nerve conduction velocities, memory loss,

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Arkema Inc.

11 TOXICOLOGICAL INFORMATION

peripheral neuropathy (numbness) in the lower legs and forearms, tremors, poor coordination and personality disorders. In addition, several studies have shown adverse effects on the heart including increases in atherosclerosis, death from coronary or ischemic heart disease and blood pressure. Other studies have indicated that long-term overexposure can cause adverse effects on the eyes including increased hemorrhages or microaneurysms of the retina. Studies of occupationally exposed workers have suggested that long-term exposure to higher levels may cause reproductive effects. Male workers had decreased libido, reduced sperm count and altered endocrine function and female workers reported menstrual irregularities. Sperm from exposed workers have shown alterations indicative of spermatogenic damage. There is conflicting evidence whether increased pregnancy complications and a higher frequency of spontaneous abortions are related to exposures in female workers.

Animal studies have confirmed neurological effects. Rats exposed for long periods to high levels showed decreased motor conduction velocity, hindlimb motor defects, peripheral nerve swelling and degeneration. Repeated exposure of monkeys has resulted in reduced visual acuity. Following inhalation exposure in male rats, minor reproductive effects such as decreased sperm counts and abnormal mating behavior, but no pathological changes were noted in testes. A two-generation reproduction study in exposed female rats showed no reduction in fertility, but mothers exposed to high dose levels had reduced pup viability. Multiple developmental toxicity studies in rats and rabbits have presented evidence of increased birth defects and embryotoxicity at high dose levels; however, exposures at levels that are not maternally toxic generally do not cause birth defects, although developmental effects have been observed. No genetic changes were observed in tests using bacteria, but have been observed in animal cells.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Data from several species of fish showed a range of tolerance (brook trout > spotfin and Lake Emerald shiners > minnows > mosquitofish > goldfish) that was most likely related to changes in the pH produced by addition of sodium hydroxide to the water. The minimum lethal concentration for minnows, Mayfly larvae and Daphnia was 100 ppm and for Chironomus larvae, 700 ppm.

Carbon Disulfide

This material is moderately toxic to Daphria magna (LC50 2.1 mg/l). It is moderately toxic to guppies (LC50 4 mg/l) and slightly toxic to green algae (LC50 21 mg/l). It is practically non-toxic to mosquitofish (LC50 135 mg/l) and bacteria (LC50 341 mg/l).

Chemical Fate Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

No data were available, but this material is a strong alkali that easily dissolves in water with resulting acid/base chemistry.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 5 of 7



Material Safety Data Sheet

Arkema inc.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual materials. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name

Flammable Liquid, Corrosive, NOS

DOT Technical Name

(Sodium Hydroxide; Carbon Disulfide)

DOT Hazard Class

3, 8

UN Number

UN 2924 PG II

DOT Packing Group RQ

Sodium Hydroxide 1000# (dry basis); Carbon

Disulfide 100#

DOT Special Information

Subsidiary hazard: 8 Corrosive

On a waste manifest, add the word "Waste"

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health Y

Fire

Υ

Delayed (Chronic) Health N

Reactive
Sudden Release of Pressure

N N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SAF	RA R	eporta	ble Quantitie	S

CERCLA RQ

SARA TPQ

Sodium hydroxide

1000 LBS NE

Water

LBS

Carbon disulfide

100 LBS

10000 LBS

SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Carbon disulfide

SARA Title III, Section 302

This product does contain chemical(s), as indicated below, currently on the Extremly Hazardous Substance List, Section 302, SARA Title III. See Section 2 for further details regarding concentrations and registry numbers.

Carbon disulfide

California Prop 65 - Developmental Toxin

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins.

Carbon disulfide

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 6 of 7



Material Safety Data Sheet

Arkema Inc.

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Carbon disulfide

Sodium hydroxide

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Carbon disulfide

Sodium hydroxide

16 OTHER INFORMATION

Revision Information

Revision Date

23 FEB 2007

Revision Number 6

Supercedes Revision Dated

07-NOV-2006

Revision Summary

Moved from Retired to Active 03.

Kev

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Miscellaneous

NOTE: Toxic carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and cause death.

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc., expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 7 of 7



Material Safety Data Sheet

Arkema Inc.

1 PRODUCT AND COMPANY IDENTIFICATION

Thio and Fine Chemicals

Arkema Inc.

2000 Market Street

Customer Service

Product Name

Philadelphia, PA 19103

Information Telephone Numbers

Caustic Soda, Shipment Grade

Product Synonym(s)

Chemical Family

Chemical Formula

Chemical Name

EPA Reg Num Product Use

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 767-5089 (24Hrs)

Phone Number

Available Hrs

8:30 to 5:30 EST 1-800-628-4453

Alkali

2 COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Hydroxide

NAOH

Ingredient Name		CAS RegistryNumber	Typical %	OSHA
Carbon disulfide		75-15-0	<0.1%	Υ
Sodium hydroxide	ı	1310-73-2	10-15%	Υ
Water		7732-18-5	85-90%	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

Orange slightly turbid liquid with foul odor.

DANGER!

FLAMMABLE LIQUID AND VAPOR.

CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE BLINDNESS.

CAUSES SEVERE DIGESTIVE TRACT BURNS.

EVEN DILUTE SOLUTIONS MAY CAUSE BURNS.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. This material is a strong alkali that can be destructive to tissue producing severe burns which are not immediately painful or visible. Contact with body tissues may produce deep ulceration, scarring or loss of sight. Concentrations as low as 2-3% can cause injury. Dermatitis (inflammation of the skin) and superficial skin damage can result from repeated or prolonged contact with very dilute solutions. High levels of dust or mist may be corrosive to mucous membranes producing eye or lung injury and chemical pneumonia. Lower concentrations may produce irritation of eyes, nose or upper respiratory tract with coughing, sore throat and shortness of breath. Prolonged exposure may result in ulceration of the nasal passages. If swallowed, this material may cause severe internal injury, characterized by pain in the mouth

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 1 of 7



Material Safety Data Sheet

Arkema Inc.

and stomach, vomiting, and breathing difficulties. Medical conditions which may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature

NE

Flash Point

70 F - >150 F

Flash Point Method

Flammable Limits- Upper

NE

Lower

NE

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

Contact with metal can form hydrogen gas. Hydrogen is extremely flammable and can form explosive mixtures with air. Closed containers may explode when heated or contents contaminated with water.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Contain, vacuum up, place in non-sparking container for disposal. Prevent waterway contamination. Construct a dike to prevent spreading. Collect runoff and transfer to drums or tanks for later disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. To avoid rapid temperature rise, violent spattering, or explosive eruptions: always add caustic to water when mixing. Never add water to a caustic when mixing. Heat water to 80-100 F before adding product. Add small amounts of product slowly and evenly over surface of water with constant stirring. Never increase concentration of product by more than 5% with any single

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 2 of 7



Material Safety Data Sheet

Arkema Inc.

HANDLING AND STORAGE

addition. Water should not exceed 160 F during addition.

Storage

Do NOT store near strong acids.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

Eve / Face Protection

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value	
Sodium hydroxide			
ACGIH CEILING	•	2 mg/m3	
OSHA TWA PEL	-	2 mg/m3	
Carbon disulfide	•		
ACGIH Skin designator	-	Υ	
ACGIH TWA	•	1 ppm	•
OSHA Ceiling PEL	~	30 ppm	
OSHA TWA PEL	•	['] 20 ppm	
-Only those components with exposur	e limits are printed in this section.		

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 3 ٥f

⁻Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

⁻ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

⁻WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.



Material Safety Data Sheet

Arkema inc.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor

Orange slightly turbid liquid with foul odor.

рΗ

NE

Specific Gravity

1.073 @ 15 C

Vapor Pressure

30 @ 100 F

Vapor Density Melting Point NA NA

Freezing Point

NA NE

Boiling Point

NE

Solubility In Water

99.98%

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Incompatibility

Reacts violently or explosively with water, acids and organic materials such as chlorinated hydrocarbons. Toxic carbon monoxide gas can form upon contact with food or beverage products.

Hazardous Decomposition Products

Will react with some metals such as aluminum, tin or zinc to generate hydrogen gas. Hydrogen gas can result in explosive hazards in confined spaces.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Single exposure (acute) studies indicate that this material is slightly toxic if absorbed through the skin (rat LD50 1,350 mg/kg; dry sodium hydroxide) and corrosive to rabbit eyes and skin. Many publications in the scientific literature confirm that this material is corrosive to all tissues. Repeated inhalation resulted in lung damage in rats. No tumors were seen in long-term animal studies. No genetic changes were observed in tests using bacteria.

No significant increases in mortality in relation to duration or intensity of exposures were reported in an epidemiologic study of a small group of workers exposed to caustic dust for 30 years or more. Massive ingestion of this material has been implicated as causing esophageal cancer. Squamous cell carcinomas of the esophagus occurred approximately 12-42 years later in individuals who survived accidental childhood ingestion and are likely due to the tissue destruction and possible scarring of the esophagus rather than a direct effect of this material.

Carbon Disulfide

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 3,188 mg/kg) or rabbits if absorbed through skin (LD50 2,025 mg/kg), practically non-toxic to rats if inhaled (1-hr LC50 40 mg/l), and severely irritating to rabbit skin and eyes. The neurological effects of long-term exposure have been documented in occupational populations who were generally exposed to levels of 20 ppm or more in viscose rayon production. Exposed workers have experienced headaches, nausea, dizziness, tiredness, memory loss, sleep disturbances, irritability and other psychological symptoms in the early stages of intoxication. Long-term exposure has resulted in decreased nerve conduction velocities, memory loss,

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 4 of 7



Material Safety Data Sheet

Arkema Inc.

11 TOXICOLOGICAL INFORMATION

peripheral neuropathy (numbness) in the lower legs and forearms, tremors, poor coordination and personality disorders. In addition, several studies have shown adverse effects on the heart including increases in atherosclerosis, death from coronary or ischemic heart disease and blood pressure. Other studies have indicated that long-term overexposure can cause adverse effects on the eyes including increased hemorrhages or microaneurysms of the retina. Studies of occupationally exposed workers have suggested that long-term exposure to higher levels may cause reproductive effects. Male workers had decreased libido, reduced sperm count and altered endocrine function and female workers reported menstrual irregularities. Sperm from exposed workers have shown alterations indicative of spermatogenic damage. There is conflicting evidence whether increased pregnancy complications and a higher frequency of spontaneous abortions are related to exposures in female workers.

Animal studies have confirmed neurological effects. Rats exposed for long periods to high levels showed decreased motor conduction velocity, hindlimb motor defects, peripheral nerve swelling and degeneration. Repeated exposure of monkeys has resulted in reduced visual acuity. Following inhalation exposure in male rats, minor reproductive effects such as decreased sperm counts and abnormal mating behavior, but no pathological changes were noted in testes. A two-generation reproduction study in exposed female rats showed no reduction in fertility, but mothers exposed to high dose levels had reduced pup viability. Multiple developmental toxicity studies in rats and rabbits have presented evidence of increased birth defects and embryotoxicity at high dose levels; however, exposures at levels that are not maternally toxic generally do not cause birth defects, although developmental effects have been observed. No genetic changes were observed in tests using bacteria, but have been observed in animal cells.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

Data from several species of fish showed a range of tolerance (brook trout > spotfin and Lake Emerald shiners > minnows > mosquitofish > goldfish) that was most likely related to changes in the pH produced by addition of sodium hydroxide to the water. The minimum lethal concentration for minnows, Mayfly larvae and Daphnia was 100 ppm and for Chironomus larvae, 700 ppm.

Carbon Disuifide

This material is moderately toxic to Daphria magna (LC50 2.1 mg/l). It is moderately toxic to guppies (LC50 4 mg/l) and slightly toxic to green algae (LC50 21 mg/l). It is practically non-toxic to mosquitofish (LC50 135 mg/l) and bacteria (LC50 341 mg/l).

Chemical Fate Information

Data on this material and/or its components are summarized below.

Sodium Hydroxide

No data were available, but this material is a strong alkali that easily dissolves in water with resulting acid/base chemistry.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 5 of 7



Material Safety Data Sheet

Arkema Inc.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual materials. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name

Flammable Liquid, Corrosive, NOS

DOT Technical Name

(Sodium Hydroxide; Carbon Disulfide)

DOT Hazard Class

3, 8

UN Number

UN 2924 PG II

DOT Packing Group

RQ

Sodium Hydroxide 1000# (dry basis); Carbon

Disulfide 100#

DOT Special Information

Subsidiary hazard: 8 Corrosive

On a waste manifest, add the word "Waste"

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health Y

Fire

Υ

Delayed (Chronic) Health N

Reactive N

Sudden Release of Pressure

Ν

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities

CERCLA RQ

SARA TPQ

Sodium hydroxide

1000 LBS

Water

NE

Carbon disulfide

100 LBS

10000 LBS

SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Carbon disulfide

SARA Title III, Section 302

This product does contain chemical(s), as indicated below, currently on the Extremly Hazardous Substance List, Section 302, SARA Title III. See Section 2 for further details regarding concentrations and registry numbers.

Carbon disulfide

California Prop 65 - Developmental Toxin

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins.

Carbon disulfide

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Product Code: 001938 Revision: 6 Issued:23 FEB 2007 Page 6 of 7



Material Safety Data Sheet

Arkema Inc.

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Carbon disulfide

Sodium hydroxide

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Carbon disulfide

Sodium hydroxide

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Carbon disulfide

Sodium hydroxide

16 OTHER INFORMATION

Revision Information

Revision Date

23 FEB 2007

Revision Number 6

Supercedes Revision Dated

07-NOV-2006

Revision Summary

Moved from Retired to Active 03.

Key

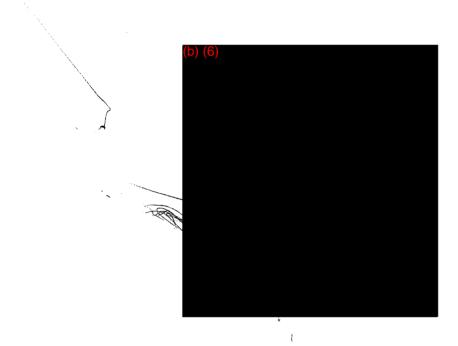
NE= Not Established NA= Not Applicable (R) = Registered Trademark

Miscellaneous

NOTE: Toxic carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and cause death.

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

Product Code: 001938 Revision: 6 Issued: 23 FEB 2007 Page 7 of 7





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		140
Frecycle-CES ROL 86678 Miral Solvent 4 dm	40.00	70.
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	100	5.88)
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CES Environmental Services, Inc. Profit & Loss Sheet

Billing/AP Inf	ormation	Salesperson:	304	BAKE	_
Name: After Chemic	A (Assigned:	۴	Unass	signed:
Contact: Jauming C					
Address: 42 45 SAVAN	ah Ave		Afted chemical Carplation - Part Arth Praduction waste		
			F4		
Phone: 409-989-0	6 02			1940	-989-0603
Fax:			Fax:	21/5/5/21/19	-332-8045
P.O Required: Y City of Houston: Y	. N. 🔀	4-hour	urcharge: Minimum:	Y: Y:	X N: N: N:
Base Oils Black Oils Li		Emulsion Oils (>	70% oil) E	mulsion (Oils (50%-70% oil)
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	Customer Special	Request/Requir	ement		
					
					

CONFIDENTIAL



4904 Griggs Road Houston, TX 77021 Phone: 713-676-1460 Fax: 713-676-1676

October 28, 2008

Jauming Chen Afton Chemical Corporation 4245 Savannah Ave Port Arthur, TX 77640

Re: Waste Disposal Services Quote

Dear Mr. Chen:

CES Environmental Services appreciates the opportunity to present to you our proposal for the management and disposal of your various wastes. Please find below our proposed scope of service and associated pricing for your consideration.

Scope of Service

- CES will arrange for the disposal on wastes managed to include exchange of open top totes for collection of the absorbent waste and the transportation of waste and oily water.
- CES will provide for the manifest, labels, and appropriate shipping documents.

Estimated Costs for Completion of Work

Description of Service	Price			
Management of Recycable Oily Water	\$0.12	per gallon		
Trailer Washout (if necessary)	\$175.00	per washout		
Recycling of Absorbent Pads	\$175.00	per tote		
Box Liner	\$35.00	per liner		
Transportation	\$75.00	per hour		

Conditions/Assumptions

- Disposal pricing subject to change pending final profile approval and receipt of waste.
- The above pricing is based on time and materials, the customer's invoice will reflect the actual quantities utilized on the project.
- All equipment utilizing motor fuel is subject to a 4 hour minimum and fuel surcharge based on the current market price of motor fuel. As of the date of this proposal, the current fuel surcharge rate is 33%.
- An energy recovery fee will be assessed on all disposal based on the current US Department of Labor Producer Price index and Labor for fuels. As of the date of this proposal, the energy recovery fee is 7.3%. A compliance surcharge of 1% is assessed on the total invoice based on compliance filing fees from federal and or state governments.

It is our sincere hope that you find our proposed scope of service and associated pricing appealing and will consider utilizing the services offered by CES Environmental Service, Inc. If you have any questions or comments or would like to begin service, please feel free to contact me at 281-701-8511.

Sincerely,

Joy Baker

CES Environmental Services, Inc.

Invoice

Date	Invoice #
7/29/2009	57899

4904 Griggs Road Houston, TX 77021

Phone: (713) 676-1460 Fax: (713) 676-1676

Bill To:

Afton Chemical Corporation

Attn: Jauming Chen 4245 Savannah Ave.

		P.O. No.	Terms	Pro	oject
			Net 30		.
Quantity	Description	on	Manifest #	Rate	Amount
5.25	7/14/09 Transportation services by CES @ \$	75.00 per hour		75.00	393.75
	13.5% Fuel Surcharge			53.16	53.16
4	Recycling of Non-RCRA material (o @ \$175.00 per tote	ily absorbent)	BOL 88883	175.00	700.00
	1% Energy Surcharge			1.40	1.40
4	Sale of cubic yard sacks @ \$35.00 ea	ach	BOL 88888	35.00	140.00
	1% Compliance Fee			13.00	13.00
	,				
	CES job #88883, 88888				
Ve appreci	ate your business!		Subtotal		\$1,301.31
count is d	nt Policy: Any unpaid balances begining ue will accrue a per annum interest rate or		Sales Tax (8	.25%)	\$11.55
ated in a f	ormalized contract.		Total	·	\$1,312.86

CES Environmental Services, Inc.

Bill Of Lading #:

88883

		Servic	:es, inc.							
Fold	er IO :		n Chemical duction was		on - Port Arthur)					
Orig	ginal –	Shippe	r Providec	Short F	orm Straight	Bill of La	eding – Not Ne	egotiable – Di	omestic	
SH	IPPEL) FROI							1	
Aft	on Ch	emical	Corporal	tion - Po	ort Arthur		11a) H Ot	J-3288 3	104	
		annah					11b)			
		-	77640				11c)			
(40	9) 989)-6727					11c)			•
said (carry goods any ti betwee	tarrier (the to its unus to its not o the interes ten shipper tyment: Ch	word carrie uai place of fitself a cor ted in all or and carrier erges to be	r being understo delivery at said tract of carriage any of said prop or intermediary bilied to Shippe	ood throughou destination, i t is mutual enty, that eve or the "Bille	i this as meaning an; fon its roule, otherwi y agreed, as to each ry service to be perfo I to" pany are set fort	r person or co se to deliver to carrier of all c rmed hereund h in the gover	rporation authorized to a another carrier on th ir as to any said over i ler shall be subject to ming contract with 8mi	o be in possession of e route to said destin all or any portion of a all the terms and cor poer. No charges oth	the property under the stion. This Billi of Lac aid route to destination differs contained in the things that the street in the street aid th	ndicated below, which he contract) agrees to fing is a receipt for on, and as to each part the applicable contract ed therein may be bille acred to the freight bill acred to the freight bill
			Billed to" party							
CO	NSIGI	VED T	D:			ĺ	ARRIER:	•		
			ntal Serv	ices, In	C.		CES Environ		ices, Inc.	
		ıgs Rd					904 Griggs			
***		TX 77			***		fouston, TX			
Intermore fortin or	odal Certifi Title face o	rms bill of Rainer Type	- ormation require		ein is the tendering p	scription	of Materials, Sp	ecial Marks, and	d Exceptions	er Act of 1992 is set
No	4	TP	THOS.	200	The state of the s	JRA NON	DOT Regulate	d Matenai (mi	xed solvents);	roducisi)
Shin	per:	Afton	Chemica	l Corpoi	ation - Port	Arthur	110			
	S.		n Cro		Signature				Date + 7	74-09
Carr	ier C	ES En	vironmer	ital Sen	ices, Inc.		. / 1			
		•	INDE		Signature		Yter	9	Date:	14/09
	_				mental Sen	. 3.	IÚ.	······································		
Per	: _8	m	Base	<u>~</u>	Signature		+ 2	-	Date:	7.14.02

White (Generator Return Copy)

Yellow (Transporter Copy)

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

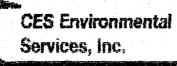
vynne (Generator Return Copy)

Bill Of Lading #:

			es, inc.		
Folder	ID:		n Chemical luction wast		on - Port Arthur)
Origi	nal – S	hipper	Provided	Short F	orm Straight Bill of Lading – Not Negotiable – Domestic
SHII	PED	FROM	A:		
CES	Envir	onme	ntal Serv	ices, ir	ic But will all in 11a) in a little till and a little til beskriver.
4904	l Grig	gs Rd			rieto baja rietoja (partino) arribija ir ištinija prietoja karalitika karalitika karalitika karalitika karalit
	ston.		021		
(713) 676-	1460			
said car carry to goods; it any time between For payn to Snipp	rier (the we its unusua t is not of li e interested I shipper so nent: Chan er or ine "E	ord carrier if place of a iself a com in all or a rid carrier ges to be b illied to pa	being understo delivery at said tract of carriage my of said prop or intermediary dilect to Shippa	destination. It is multiple entry, that every, that every or the "Bille or written cor	k cept as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for the street, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party are set to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract set to be performed thereunder shall be subject to all the terms and conditions contained in the applicable contract set to be performed therein may be billed to be party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed as the party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed as the time of shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill.
CON	SIGN	EN T/) .		CARRIER:
	7.375577			ion - Pr	ort Arthur CES Environmental Services, Inc.
	Sava				4904 Griggs Rd.
3.77	- Jan 17 17		77640	e ^{nte}	Houston , TX 77021
Haz	Conta	iner Type	Total Quantity	Unit WWVoi	Description of Materials, Special Marks, and Exceptions
No	4.4	TP-	4	Each	cut top tote w/ sack
House after manage		A That desirable market may			
			A	and the same of the part	
1	·		nke ne and met ne and an	The Residence and the second Spaces of the second	
Shipp	er : C	T			ervices, Inc.
Per ;	<u>, 5</u>	teu	2 Stv	icha	Signature: x Date: x 7-14-69
]arrie					vices, Inc.
					Signature: Date: 7/14/09
decei	ving l	Facilil	y Anon	Cnem	ical Corporation - Porf Arthur
Per:	yS!	ephe	~ (rou	eh_	Signature: y de / Date: 7/14/09

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)



Date: 7/14/2009	Manifest # :	
Afton Chemical Corporation Arthur	-Port Ticket:	88863
Phone: 4099896727 CES Environmental Serv	Consignee :	CES Environmental Services, Inc.
ransporter :		
signature & AFCL	Signature	
Leave CES Yard: 7:00x	Arrive At	t Destination 11:30
Arrive At Customer: 8:45+1	Begin Ur	nloading: 11.40
Begin Loading: 8:55 nm		nloading: <u>12:15</u>
Finish Loading: 9:40m		estination:
Leave Customer: 9:4(4m	Artive Al	t CES Yard:
Customer PO #:	Total Hours:	CES Unload:
Gross Weight:	_ Ending	Odometer :
Tare Weight:	Begining	g Odometer :
Net Weight:	_ †Total Mi	les:
Driver: Hernandez, Joe	Tractor # : 107	
gnature: J. HEAVEDEZ	Trailer # :	Box #:
Comments/Equipment :	, + dh 4	CUT DOEAT TOP
OTEC AND 1/1 194	70 Muc To	

CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021

Phone: (713) 676-1460 Fax: (713) 676-1676

Invoice

Date	Invoice #
7/29/2009	57899



Bill To:

Afton Chemical Corporation

Attn: Jauming Chen 4245 Savannah Ave.

		P.O. No.	Terms	Pr	oject
			Net 30		
Quantity	Description		Manifest #	Rate	Amount
	7/14/09				
5.25	Transportation services by CES @ \$75.0	0 per hour		75.00	393.75
; 	13.5% Fuel Surcharge			53.16	53.16
4	Recycling of Non-RCRA material (oily a @ \$175.00 per tote	bsorbent)	BOL 88883	175.00	700.00
	1% Energy Surcharge			1.40	1.40
4	Sale of cubic yard sacks @ \$35.00 each		BOL 88888	35.00	140.00
	1% Compliance Fee			13.00	13.00
	CES job #88883, 88888				
We appreci	ate your business!		Subtotal		\$1,301.31
eccount is d	nt Policy: Any unpaid balances begining on the will accrue a per annum interest rate of 7.5	ne 30th day after the %, unless otherwise	Sales Tax (8.2	25%)	\$11.55
stated in a f	ormalized contract.		Total		\$1,312.86

CES Environmental

White (Generator Return Copy)

Yellow (Transporter Copy)

Bill Of Lading #:

88883

	이번 등 학교 회사 이번째 그들이 되고, 생각하면 방송했었죠
Folder ID: Afton Chemical Corp (Afton - Port Arthur) Production waste	
Original – Shipper Provided Short Form Straight Bill of	Lading – Not Negotiable – Domestic
SHIPPED FROM:	
Afton Chemical Corporation - Port Arthur	11a) HOU-3288 3104
4241 Savannah Ave	17.116
Port Arthur , TX 77640	
(409) 989-6727	본 (11c) 역 보는 사람들 등 보고 있는 사람들이 함께 있다.
said carrier (the word carrier being undersized throughout this as meaning any person- carry to, its unusual place of delivery at said destination. If on its route, otherwise to deli- poods, it is not of itself a contract of carriage, it is mutually agreed, as to each carrier of any time interested in all or any of said property, that every service to be performed hel- between shipper and carrier or intermediany. or payment: Charges to be billed to Shipper or the "Billed to" party are set forth in the g o Shipper or the "Billed to" party without prior written consent of Shipper. The extra cop	notion of packages unknowny, marked, consigned, and destined as indicated below, which or corporation authorized to be in possession of the property under the contract) agrees to wer to another carrier on the route to said destination. This Bill of Lading is a receipt for i all or as to any said over all or any portion of said route to destination, and as to each party reunder shall be subject to all the terms and conditions contained in the applicable contract poverning contract with Shipper. No charges other than those contained therein may be bille by of this Bill of Lading, furnished at the time of shipment, must be attached to the treight bill.
Liberation to Shipper or the "Billed to" party and sent to:	
CONSIGNED TO:	CARRIER:
CES Environmental Services, Inc.	CES Environmental Services, Inc.
1904 Griggs Rd	4904 Griggs Rd.
Houston, TX 77021 his is to certify that the product stated below are properly classified, described, package	Houston , TX 77021
policable regulations of the Department of Transportation. If this Shipment moves betw	een to posts by a carrier by water, the law requires that the Bill of Lading shall state whether
is carrier's or stipper's weight." **The carrier's Or stipper's weight."	intions at 43 CFR 390.540 implementing the Intermodal Safe Container Act of 1992 is saty
iffi on the face of this bill of lading. The shipper name herein is the tendering party.	
az Container Tota! Unit Descripti	on of Materials, Special Marks, and Exceptions
No. Type Quantity Wt/Vol	[기술 [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]
	(oilyabsorbents)
IO Non RCRAN	Ion DOT Regulated Material (mixed solvents/productst)
1400 200 7gc	
2000	

	지선 보고 하는 것도 먹을 하는 것 하면 그 것 같아?
6.5	
bipper: Afton Chemical Cerporation - Port Arth	ur
er: Stephen Crouch signature:	Date: 779-09
arrier CES Environmental Services, Inc.	
er: J. Heavyor Signature	15 (eg) Date: 7/14/09
TO Consider the state of the st	
eceiving Facility CES Environmental Services	FIIIC.
ver: Sam Baswa Signature:	L 2 Date: 7.141.02

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

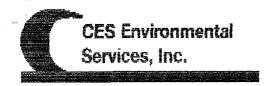
CES Environmental Services, Inc.

Bill Of Lading #:

88888

Fold	er ID :		n Chemical luction wast		on - Port Arthuri					
Onig	ginal – S	Shipper	Provided	Short F	orm Straight Bill of Lading – Not Negotiable – Domestic					
SH	IPPED	FRON	A =							
CE	S Envi	ronmei	ntal Serv	ices, li	ıc. 11a)					
490	4904 Griggs Rd 11b)									
	Houston , TX 77021 11c)									
(71	3) 676	-1460			11c)					
said country goods any th betwee For pa to Shirt	rainer (the water its unusur to its unusur this not of me intereste en shipper a yment: Char oper or ine "i	rord carrier al place of o itself a cont d in all or a and carrier o ges to be b gilled to" pa	being understo lelivery at said ract of carriage ny of said propo ir intermediary. Ilied to Shipper	od througho destination. . It is multus erly, that eve or the "Bills r writen cor	cept as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which if this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for ly agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party ry service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract d to "party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed sert of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipmerit, must be attached to the freight bill					
CO	NSIGN	ED TC) :	***************************************	CARRIER:					
			-	on - Po	ort Arthur CES Environmental Services, Inc.					
	1 Sava		•		4904 Griggs Rd.					
Pori	t Arthu	r, TX	77640		Houston, TX 77021					
This is	to certify the	at the produ	ct stated below epartment of Tr	are properly	classified, described, packaged, marked and labeled and is in proper condition for transportation according to the . If this Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state whether					
		this bill of it			Highway Administration regulations at 49 CFR 390.549 implementing the Intermodal Safe Container Act of 1992 is set rein is the tendering party. Description of Materials, Special Marks, and Exceptions					
	No.	Туре	Quantity	Wt/Voi						
No 	4	TP	4	Each	out top tote w/ sack					
Tydaldikus. Bed	ning of A philosopes distill brankets	***************************************								

- -	ner: (CES E	nvironme	ental S	ervices, Inc.					
Per	-	teve	Str	7	Signature: Date: 7-14-09					
_arr	ier <u>C</u> E	S Env	ironmen	tal Ser	vices, Inc.					
	•		MOEZ	F-14	Signature : Date : 7/14/09					
	iving: : چکا	tacilit tapku	y Alton ~ Crow	eh eh	Signature: 2 4 / 09					
	,	_	-							
White	(Generato	or Return i	Copy)	Y ellow	(Transporter Copy) / Pink (Receiving Facility Copy) Golden Rod (Generator 1st Copy)					



Date: 7/14/2009		Manifest #:	
Afton Chemica	al Corporation - Port		
Client: Arthur		Ticket:	88883
Phone : 4099896727		Consignee :	CES Environmental Services, Inc.
CES Envir Transporter :	onmental Services, Inc.		•
ignature 🗴 🦊 🤇		Signature	
Leave CES Yard:	7:00A~	Arrive At	Destination \\:30
Arrive At Customer:_	2:45*	Begin Un	oloading: <u> </u>
Begin Loading:	8:55 au	Finish U	nloading: <u>12!15</u>
Finish Loading:	9:40 AM	Leave De	estination :
Leave Customer : _	9:45 Am	Arrive At	CES Yard :
Customer PO #:		Hours:	CES Unload:
Gross Weight:		Ending (Odometer :
Tare Weight:	no ¹⁸⁸⁸ an 1888a'a - March Hande - 15 and dagan kanan 1880a.	Begining	g Odometer :
Net Weight:		Total Mil	les:
Driver: Hernandez, Joe	Trac	tor#: 107	Tote # :
gnature : J. Henn	HIDEZ Tra	iler#:	Box # :
o Comments/Equipment :			*
	DELIVERD +	- Ay 4	CUT OPEN TOP
etes and p	W 18 7 78 1	Auc To	<i>LES</i>
			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\



JOB INFORMATION PROFILE

Folder ID : Afton Chen Production	nical Corp (Afton - Port Arthu waste	ır)	
Customer: Afton Cher	mical Corporation - Port Arthur	Driver : Hernandez, J	<u>oe</u>
Address: 4241 Sava	nnah Ave	Helper:	
City,State,Zip: Port Arthur	r TX , 77640	Date: 7/14/2009	Time: <u>0800</u>
CES Contact :() -		Truck # 107	Trailer#
Job Description	:		
Site contact: Stephen Couch	n 409.989.0604		
DELIVER: 1 cut top totes w/ sacks			
Pick up the following: Manifest 2 totes of oily absorbent	ICES # 2104]		
·	[CES # 3104]		
Return to CES and check in	to processing facility.		
ID #: 88883 CUSTOMER INFORMA	TION		
OPERATION HOURS:	SHIPPING/RECEIVING CONTA	CT: AFTER HOURS CONT	FACT:
Open:	Name:	Name:	
Close:	Number:	Number:	
RECEIVING INFORMAT	TION		
OPERATION HOURS:	SHIPPING/RECEIVING CONTA	CT: AFTER HOURS CONT	FACT:
Open :	Name:	Name:	
Close:	Number:	Number:	
PURCHASE ORDER NUMBER I	REQUIRED: YES	NO	
IF YES, P.O. #			
PPE REQUIRED: YES	□ NO	HACSC REQUIRED: YES	□ NO
IF YES, WHAT?		IF YES, WHAT?	
CAN CUSTOMER LOAD US:	YES NO	WASHOUT ANTICIPATED:	YES NO
ROPPER PUMP:	YES NO	BOX LINER REQUIRED	☐ YES ☐ NO
LOADING/UNLOADING TRAILER TYPE:	☐ REAR ☐ BELLY ☐ DOES NOT MATTER		
BOX NUMBER:	sawasakahahasakasakasaka na ara-ka na ar		e de la companya de l
CES OWNS BOX:	YES NO CUSTO	MER OWNS BOX: YES NO	0



Bill To:

COPY

Invoice

Date	Invoice #
6/4/2009	56702

Afton Chemical Corporation Attn: Jauming Chen 4245 Savannah Ave.

		P.O. No.	Terms	Pr	oject
			Net 30		
Quantity	Description	1	Manifest #	Rate	Amount
5.75	5/27/09 Transportation services by CES @ \$75	5.00 per hour		75.00	431.25
	9.5% Fuel Surcharge			40.97	40.97
2	Disposal of Non-RCRA material (oily @ \$175.00 per tote	absorbent)	5596900JJK	175.00	350.00
4	Recycling of Non-RCRA material (mit @ \$35.00 per drum	xed solvents)	BOL 86678	35.00	140.00
2	Sale of cubic yard sacks @ \$35.00 eac	h	BOL 86681	35.00	70.007
	1% Compliance Fee			10.38	10.38
					·
	CES job #86671, 86678, 86681				
We appreci	ate your business!		Subtotal		\$1,042.60
account is d	nt Policy: Any unpaid balances begining of lue will accrue a per annum interest rate of formalized contract.		Sales Tax (8	25%)	\$5.78
stated III d I	ormanized contract.		Total		\$1,048.38

Ple	ase prir	nt or type (Form desi	gned for use on elit	e (12-pitch) typewrite	er.)			1					. OMB No.	2050-003
1	WA	ORM HAZARDOUS ASTE MANIFEST	1. Generator ID Nui	mber		1	7.) 989	-6727		<u>559</u>		0 J.	JK
	After 424: Post	erator's Name and Maili in Chemical Corpor I Savarrian Asia Arthur, TX 7840	retion - Port Are	18.8	State 10:			mkelCo zrnen A # , TX 7	eporetio f e 7640	nan mailing addres				
	6. Tran	ator's Phone: (42) sporter 1 Company Nan		e lee			-/ Chal	e ID 3	(409) 99 (1904)	U.S. EPA ID N	lumber 10895	0461		
		sporter 2 Company Nan		T AR Post			7			U.S. EPA ID N		0.407		
$\ \ $	8 Dec	ignated Facility Name ar	nd Site Address			<u> </u>			<u> </u>	U.S. EPA ID N	lumber			
	490*	Brukermenst Se I Griggs Ad	rvices Inc				Stat	2 10 3	COME	0.0. LI AID I	idi ilbei			
		stion TX, 77023 's Phone:	2) 676-1460							DXT	00895	0461		
	9a. HM	9b. U.S. DOT Descript and Packing Group (if		Shipping Name, Hazard	Class, ID Number,			IO. Containe No.	ers Type	11. Total Quantity	12. Unit Wt./Vol.	13.	Waste Code	IS
뎼		1Non BCRA Non D	OT Regulated P	leterial (Oily Abac	irhærit)		0	2	T/	600	133.	000450	4 j	
GENERATOR		2									1 3 1 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
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		3.												
											 	***************************************	B	
		4.											,	
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	11)	ecial Handling Instruction or 10 Anon Char Production HOU-2004	ios martin.)	quarks the a	sged, merki pplitable re (1912)	ad send labe quietions of	led, and the Dac	ere viça Aroneric	risis ara prop roper conditio of Transport 4)	n for trans sticen	sportans CES Job	n accordi F - 3557	
	m E	ENERATOR'S/OFFERO arked and labeled/placa xporter, I certify that the certify that the waste min	rded, and are in all re	spects in proper conditions in the top the top the top to the top top to the top	on for transport acc erms of the attache	ording to applicated EPA Acknowle	able international adgment of Con	al and nation sent.	nal governm	nental regulations.				
		tor's/Offeror's Printed/Ty			<i>f</i>		ature	nu (Noce			Mor	nth Day	
N L N	16. Inte	mational Shipments	Import to I	J.S.		Export from U.	-	Port of entry	<u> </u>				ン <i>(</i> 人)	1104
		orter signature (for expo	rts only):		•			Date leaving		,				
TRANSPORTER		orter 1 Printed/Typed Na				Sign	auge /		al			Mor	nth Day	Year
NSP	Transpo	orter 2 Printed/Typed Na	Me Me	Mc-	-	Sign	ature	SA	191		<u> </u>		<u>)</u> かり nth Day	7 09 Year
TR/	40.00					100							l	1
🚹	37.5	crepancy screpancy Indication Spa	ace Quanti	tv	Type		Res		<u> </u>	Partial Reje	ction		Full Reje	
								Reference N	lumber:	/		" in " }		Journ
DESIGNATED FACILITY	18b. Alt	emate Facility (or Gener	ator)					John Bridge		U.S. EPA ID N	umber			
D FAC		s Phone:	lib. (a. Canandari)		_ <u></u>		/*/ 							
NATE	ioc. Sig	nature of Alternate Facil	illy (or Generator)									Mo	nth Day	Year
ESIG	19. Haz	ardous Waste Report M	anagement Method C	odes (i.e., codes for haz	zardous waste treat	ment, disposal,	and recycling s	ystems)						
–	i.	41				3.				4				
		ignated Facility Owner of	r Operator: Certificati	on of receipt of hazardo	us materials covere			ted in Item	188			14-	oth Do	Voor
	Printed/	Typed Name	هر د			Sign	ature	A STATE OF THE STA		silin (kultur). Tanggaran		Mo.	nth Day	Year
EPA	Form 8	3700-22 (Rev. 3=05) F		re obsolete.		1 %			994		TR	ANSPO	RTER'S	

CES Environmental Services, Inc.

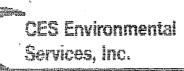
Bill Of Lading #:

86678

No. Type Quantity W6Vol No. RCRA Non DOT Regulated Material (mixed solvents/productst) Prince : Afton Chemical Corporation - Port Arthur Per : Afton Chemical Corporation - Port Arthur Date : 5-27-09 Per : Afton Chemical Corporation - Port Arthur Per : Afton Chemical Corporation - Port Arth	Folder ID	Aften Chemical Production was		Port Arthur)
Afton Chemical Corporation - Port Arthur 4241 Savannah Ave 411b) Port Arthur - TX 77640 11c) 11c) The processory described clarify. Improved pools upon a coal as included controlled to the processory of the processor of the processory of the processory of the processor of the processor of the processory of the processor of the pr	Original – Sl	nipper Providec	Short Form	n Straight Bill of Lading – Not Negotiable – Domestic
42241 Savannah Ave Port Arthur TX 77640 11c) 11c) 11c) 11d) 1	SHIPPED I	ROM:		성기 경험 사람이 가지 않는데 살아 나는 어떻게 되는데 되었습니다.
Port Arthur , TX 77640 11c) The precently described below, in segment pool order, is cased an index (context and condition of perhapses unknown), marked, contrigined, and destination and index destination of the index of perhapses unknown, marked, contrigined, and destination and index of the contribution of perhapses unknown, marked, contrigined, and destination and index of destined or the index of destined or of destined or of destined or and index of destined or of destined or of destined or of destined or and index of destined or of destined or and index of destined or of desti	Afton Chen	nical Corpora	tion - Port	Arthur 11a) HOU-3288
The processory described below in separated posts order, according and control and control from the process of				· (11b) (11b) (11c) (11c) (11c) (11c) (11c) (11c)
The property described below, in apparent good criser, as coal as mided (content and condition of packages unknown), manual, conditional, and destinad as indicated below, which and crisine for the degree destination from the control content in the word carrier being undestinated as indicated below, which and crisinal charges the destination of the property indicated as indicated	The second secon			님 아이들의 용명하다. () 1c) 나는 하는 사람은 하는 사람들은 공연하다
said carrier fits used carrier being understood fires as meeting any presson or concession authorized to be in proceeded of the property under the control agreed to the transport of the transport of the control and the property under the control agreed to the control and the property under the control agreed to the property of the property of the control agreed to the property of the property and the property of the property of the property and the prop	(409) 989-(3727		
CONSIGNED TO: CARRIER: GES Environmental Services, Inc. GES Environmental Services, Inc. GOUGH Griggs Rd. Houston, TX 77021 Its is to certify that the product stated below are properly classified described, packaged, manded and is in proper condition for transportation according to the positions of the Department of Transportation, if this Shipment moves belowed not be to year by water, the proper swellpt. The first or certify that the product stated below are properly classified described, packaged, manded and is in proper condition for transportation according to the positions of the Department of Transportation, if this Shipment moves belowed not be provided by water, the third of being shall state whether is carrier or attapper a weight. The proper is carried to the first shill of inding. The shipper partie freedn is the tendering party. The proper is a condition of the parties of this shill of inding. The shipper partie freedn is the tendering party. The proper is a condition of the parties of this shill of inding. The shipper parties freedn is the tendering party. The proper is a condition of the parties of this shill of inding. The shipper parties freedn is the tendering party. The proper is a condition of the parties of this shill of inding. The shipper parties freedn is the tendering party. The proper is a condition of the parties of this shill of inding. The shipper parties freedn is the tendering party. The proper is a condition of the parties of the parties of the parties of the parties of this shill of inding. The shipper parties the parties of the	said carrier (the wo carry to its unusual goods, it is not of its any time interested between shipper an	rd carrier being undersit place of delivery at said self a contract of carriag in all or any of said prop d carrier or intermediary es to be billed to Shippe	ond throughout this idestination. If on its e. It is musically agreety, that every service the "Billed to" p	s as meaning any person or corporation authorized to be in possession of the property under the contract) agrees its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for greed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each perceivice to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract party are set forth in the governing contract with Shipper. No charges other than those contained therein may be bi
TES Environmental Services, Inc. GO4 Griggs Rd. Houston , TX 77021 Houston , TX 770				or orapid. The sound copy of the original statements at the original or another than the statement of the recipies
Auguston , TX 77021 This is to criffy that the product stated below are properly classified, described, perchape, marked and isoleted and is negoes condition for transportation according to the product regulations of the Depotation of the Depota				나는 이 사람들은 그 이번 사람들은 사람들이 한 경험 전환 사람들이 되었다. 나는 그는 사람들은 사람들이 되었다.
Houston , TX 77021 Houston , TX 77021 His is to certify this the product stated below are properly classified, described, packaged, marked and labeled and is in proper condition for transportation according to the periodic distinguished of the separation of the Description of the Description of the Description of the Shipment moves between boots by a certific by water, the law requires the time bill of Lading shall state whether its contract or shipper's weight. He law requires the time bill of Lading shall state whether its contract or shipper is weight. He law requires the time bill of lading. The shipper name herein is the lendering party. All Container	107		ices, Inc.	
This is to certify that the product stated below we properly classified, described, described, askaped, merited and list-led and is in proper contition for the the product strate of the law requires that the Bill of Lading strate whether its critical and the strategies weight. **Removal Certificate, All information required by Federal Highway Administration regulations at 49 CFR 390,949 implementing the intermodal Bate Container Act of 1992 is set information for the same of this all of hiding. The shipper came therein is the tendering party. **Removal Certificate, All information required by Federal Highway Administration regulations at 49 CFR 390,949 implementing the intermodal Bate Container Act of 1992 is set information and including the shipper came therein is the tendering party. **Removal Certificate All information required by Federal Highway Administration regulations at 49 CFR 390,949 implementing the intermodal Bate Container Act of 1992 is set information and including the shipper came therein is the tendering party. **Removal Certificate All India Indi				그 그 그 그 그 그 그 사람들이 되었다. 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그
policitic regulations of the Department of Transportation, this Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state whether is carrier or stripper's vegict, in the model of the face of this bill of hading. The shipper name herein is the lendering party. Confisher	and the second of the second o	194		
Per: Sephin Court Signature: The Date: 5-27-09 Per: The Monday Signature: Managed Date: 05-27-09 Per: Al Langur. Signature: Date: 5/2/57		Quantity	1	Description of materials, openial marks, and exceptions
Per: Seph. Services Signature: A Date: 5-27-09 Per: The Monday Signature: A Date: 05-27-09 Per: Al Languer: Signature: Date: 5/2/37	No	Type Quantity	MRAOI	
Per: Seph. Services Signature: A Date: 5-27-09 Per: The Monday Signature: A Date: 05-27-09 Per: Al Languer: Signature: Date: 5/2/37	No	Type Quantity	MRAOI	
eceiving Facility CES Environmental Services Inc. Per: Al Language Signature: Signature: Date: 5/2/45	No1	Type Quantity DM 226	Wavoi /	Non RCRA Non DOT Regulated Material (mixed solvents/productst)
eceiving Facility CES Environmental Services Inc. Per: Al Zagaran Signature: Date: 5/20/30	hipper: A	Type Quantity DM 226 fton Chemica Ph. Use	Cerporation	Non RCRA Non DOT Regulated Material (mixed solvents/productst) ion - Port Arthur Signature:
Per: Al Langaria Signature: Date: 5/2/45	hipper: A	Type Quantity DM 226 fton Chemica Ph. Use	Cerporation	Non RCRA Non DOT Regulated Material (mixed solvents/productst) ion - Port Arthur Signature: Date::5-27709
	hipper: A	Type Quantity DM 226 fton Chemica	Cerporation Sintal Service	Non RCRA Non DOT Regulated Material (mixed solvents/productst) ion - Port Arthur Signature: Date::5-27709
White (Generator Return Copy) Yellow (Transporter Copy) Pink (Receiving Facility Copy) Golden Rod (Generator 1st Copy)	hipper: Aver: X	Type Quantity DM 226 fton Chemica PW Vivo	Cerporation Signal Service	Non RCRA Non DOT Regulated Material (mixed solvents/productst) ion - Port Arthyr Signature: Date: 5-27-09 Signature: Date: 05-27-09
	hipper: Aver: X	Type Quantity DM 226 fton Chemica PW Vivo	I Corporation Signal Service Signal Service Signal And Signal Sig	Non RCRA Non DOT Regulated Material (mixed solvents/productst) ion - Port Arthur Signature: Date: 5-27-09 ses, Inc. Signature: Date: 0.5-2.7-09 sental Services Inc.

Bill Of Lading #:

86684



		•	
Folder ID :	Afton Chemical Corp (Afton - Port Arthur Production waste		
Original – St	nipper Provided Short Form Straight	Bill of Lading – Not Negotiable – Domest	
SHIPPED F			
CES Enviro	nmental Services, Inc.	11a)	
4904 Grigg	s Rd	444	
Houston . T	X 77021	A company of the comp	
(713) 676-1	460	460	

The property described below, in apparent good order, except as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to carry to its unusual piace of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for goods; it is not of itself a contract of carriage, it is mutually agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract between shipper and carrier or intermediary.

For payment: Charges to be billed to Shipper or the "Billed to" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed to Shipper or the "Billed to" party without prior written consent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill submitted to Shipper or the "Billed to" party and sent to:

CONSIGNED TO:

Afton Chemical Corporation - Port Arthur

4241 Savannah Ave Port Arthur, TX 77640

CARRIER:

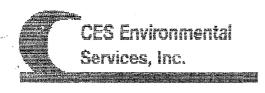
CES Environmental Services, Inc.

4904 Griggs Rd. Houston, TX 77021

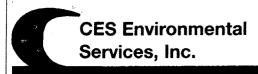
This is to certify that the product stated below are properly classified, described, packaged, marked and labeled and is in proper condition for transportation according to the applicable regulations of the Department of Transportation. If this Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state whether it is "carrier's or shipper's water."

intermodal Certificate: All Information required by Federal Highway Administration regulations at 49 CFR 330.549 (implementing the Intermodal 8 at Comtainer Act of 1992 is set forth on the face of this bill of lading. The shipper mante herein is the tendering party.

Haz	Cont	einer	Total	Unit	Description of Materials, Special Marks, and Exception	5
	No.	Type	Quantify 	[Wt/Vol]		
No	2	TP	002	Each	out top tote w/ sack	
una Trabina						
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fanation a	Philip the Property and Printer Security and	** ***********************************		***************************************		
•	per:_ :IQc		$T \cdot T$	71	exfices, Inc. Signature : Date :	25-27-09
•			L			13 A D
Carr	ier <u>C</u>	ES Env	vironmen 7 N	tal Ser	vices, Inc.	
ľær	Tev	whoh	Joo JA		Signature : Date : ¿	25-27-00
Reci	Biving	Facili	y Afton	Chem	ical Corporation () Port Arthur	
Per	X 3	teph	n Ur	Level	Signature : Date :	5-27-09
White	∖ ∈ (Generat	or Return	Сору)	Yellow	(Transporter Copy) Pink (Receiving Facility Copy) Golden Rod	(Generator 1st Copy)
- /						



Foiler ID :	Afton Chemical Corp (Afton - Por Production waste	t Arthur)	
	6/27/2009	- Wanifest #:	
	Afton Chemical Corporation - Port Arthur	turer	86671
Phone: 4	099896727	- Consignee :	CES Environmental Services, Inc.
Transporter	CES Environmental Services, Inc		
Synature	Attl	Signature	
Leave CES	Yard: 1330	arive At	Destination 19-35
Arrive At C	ustomer: <u>15:30</u>	Cegin Uni	loading: <u>18:45</u>
Begin Load	ling: 15:45	Action of Control of C	loading: <u>19:20</u>
Finish Load	· ·	Leave De	stination:
leave Cust	tomer: 16:30	Arīve Āt	CES Yard:
Customer	PO#:	1 Hours: 5.15	CES Unload:
Gross Weig		Ending O	dometer: 10251
Tare Weigh			Odometer : 100 43
Net Weight	2	Total Military	es: <u>208</u>
Driver: 1e	Trible of Aud	actor#: <u>279/</u>	(Tote #:
iignature :	Social Ti	railer # : 247	Box #:
ob Comments/E	Equipment: Loaled Aal	Deliveus	1 2. open-jop 10/2
WITh	Livers. Picked	up 2To	res-oily national
4 Drum	5-19h solvents	J	
White (CES	GOTTice) Yellow (CES Office / Bill	ing) Pink (CES	GOffice / IFTA) Golden Rod (Customer)



JOB INFORMATION PROFILE

Folder ID : Afton Chem Production	ical Corp (Afton - Port Arthur) waste		
Customer: Afton Chem	ical Corporation - Port Arthur	Driver: Sanchez, Jose	
Address: 4241 Savan	nnah Ave	Helper:	
City,State,Zip : Port Arthur	TX , 77640	Date: <u>5/27/2009</u> Ti	me: <u>2nd</u>
CES Contact :() -	·	Truck# 279 Trai	ler# <u>217</u>
Job Description :	•		
Site contact: Stephen Couch	409.989.0604	·	s 11
DEL 17/ED	- they	will load you	with
DELIVER: 2 cut top totes w/ sacks		te the wroavin	a then
2 out top totos w/ sacks	Parie	is, locy in give	1 1 755
Pick up the following: Manifest	10	will load you ts, they're givin us. Bring ba	ck to CC3
- 2 totes of oily absorbent	[CES # 3104]		
5 drums of lab solvents	[CES#3288]		
Return to CES and check into	processing facility.		
CUSTOMER INFORMAT OPERATION HOURS: Open: Close: RECEIVING INFORMATION	SHIPPING/RECEIVING CONTACT: Name: Number:	AFTER HOURS CONTACT Name: Number:	
OPERATION HOURS:	SHIPPING/RECEIVING CONTACT:	AFTER HOURS CONTACT:	
Open :	Name:	Name:	
Close:	Number:	Number:	1 DATE OF THE STATE OF THE STAT
600-00-00-00-00-00-00-00-00-00-00-00-00-	7		
PURCHASE ORDER NUMBER R	EQUIRED: YES NO		
<u>IF YES, P.O. #:</u>			- 140 (
PPE REQUIRED: YES	□ NO <u>H</u>	IACSC REQUIRED: YES N	
IF YES, WHAT?		IF YES, WHAT?	. *
CAN CUSTOMER LOAD US:	☐ YES ☐ NO	·	
ROPPER PUMP:		WASHOUT ANTICIPATED:	☐ YES ☐ NO
NOFFER FORIE	YES NO	BOX LINER REQUIRED	☐ YES ☐ NO
LOADING/UNLOADING TRAILER TYPE:	REAR BELLY		
INMALEN LIFE;	☐ DOES NOT MATTER		
BOX NUMBER:	ga war dia makaban na ili magaan makaba mataka mataka na ga maga mamaba a madika makaban makaban haka makaban h	ARGINE NO A POP NO AREA NO AREA NO AREA NO POPULAR A MARKAM NEW PRINCIPLE NEW YORK TO CHARGE A PROPERTY OF THE PARTY OF TH	
CES OWNS BOX:	YES NO CUSTOMER O	WNS BOX: YES NO	



COPY

Invoice

Date	Invoice #
4/28/2009	55950

Bill To: Afton Chemical Corporation

Attn: Jauming Chen 4245 Savannah Ave.

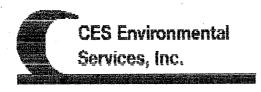
		P.O. No.	Terms	Pro	oject
			Net 30		
Quantity	Description		Manifest #	Rate	Amount
	4/22/09				
8	Transportation services by CES @ \$75.	00 per hour		75.00	600.00
	7.5% Fuel Surcharge			45.00	45.00
2,000	Recycling of Oily Water @ \$0.12 per ga	allon	BOL 84976	0.12	240.00
	1% Compliance Fee			8.85	8.85
	V.				
:					
			·		
	•				
			·		
/e appreci	ate your business!		Subtotal		\$893.85
count is d	nt Policy: Any unpaid balances begining on the will accrue a per annum interest rate of 7.	the 30th day after the 5%, unless otherwise	Sales Tax (8	.25%)	\$0.00
ated in a f	ormalized contract.		Total		\$893.85

CES Environmental Services, Inc.

Bill Of Lading #:

84976

		end line		그 그리 얼마 뭐 하다는 말로 하고 있다.
Folder ID :		n Chemical k Product	Corp (Atte	on - Port Arthur)
Original –	Shipper	Provided	Short F	orm Straight Bill of Lading – Not Negotiable – Domestic
SHIPPEL) FR()	vi :		
Aiton Ch	emical	Corporat	ion - Po	ort Arthur 11a) HOU- 3 272 3
4245 Sav				
Port Arth	ur , TX	77640		B - 1 [10.186
(409) 989	9-0602			
sold carrier (the carry to its unus goods, it is not o	word carries and place of of itself a con ated in all or a	r heing understo delivery at said bract of cambage any of said prop	od throughou destination. I tils mutual city, that eve	cept as noted (content and condition of packages unknown), marked, consigned, and dealined as indicated below, which dithis as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Ladina is a receipt for by agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each part sy service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract.
For payment Chi to Sitipper or line submitted to Ship	"Billed to" p	eriy willrout prio	r writen com	d to" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be bitte sent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill
CONSIGI	NED TO	3 : /		CARRIER:
CES Envi	ronme	nțal Servi	ices, In	c. CES Environmental Services, Inc.
4904 Gric	jgs Rd.			4904 Griggs Rd.
Houston,	TX 77	021		Houston, TX 77021
No.	Type	2000	G	Non-RCR-Mon-DOT Regulated Material DOT Regulated Oily Water
	eritorio di socializzazione del socializzazion			
hipper:	Afton (<u>Chemical</u>	Corpor	ration - Port Arthur / / /
er:	an various programmes programmes and			Signature: Aft Col. Date:
				vices, Inc.
		3 50		Signature: Audres Boto Date: 4-22-09
eceiving	Facili	ty CES	Environ	imental Services, Inc.
ier: 2)AM I	BROWI	<u> </u>	Signature : Date : 4.27.0
White (Genera	itor Return	Сору)	Yellow ((Transporter Copy) Plnk (Receiving Facility Copy) Golden Rod (Generator 1st Copy)



Arrive At Customer: 8:00 4M Begin Unloading: Begin Loading: 8:15 AM Finish Unloading: 2:00 pm Finish Loading: 11:00 AM Leave Destination: Leave Customer: 11:15 AM Arrive At CES Yard: 12:55 Pm Customer PO #: Gross Weight: Total Hours: Segining Odometer: 191809 Begining Odometer: 1918/7 Net Weight: Begining Odometer: 192 Driver: Soto, Andre Tractor #: 104 Tote #: Signature: Andre Soto Soto Box #:	Forger ID:	Bulk Product	Oil Warer			
Client: Arthur Phone: 409990602 CES Environmental Services, Inc. Transporter: Signature Leave CES Yard: 6000 AM Arrive At Destination 12:55 p. Arrive At Customer: 8:00 AM Begin Unloading: Begin Loading: 8:15 AM Finish Unloading: 2:00 p. Finish Loading: 11:00 AM Leave Destination: Leave Customer: 11:15 AM Arrive At CES Yard: 12:55 p. Customer PO #: Customer PO #: Customer PO #: Caross Weight: Ending Odometer: 191809 Tare Weight: Begining Odometer: 1916/7 Net Weight: Total Miles: 192 Driver: Soto, Andre Tractor #: 104 Tote #: Signature: Andre Soto Trailer #: Box #:	Date: 4	4/22/2009		Manifest #:	***************************************	
Transporter: Signature Leave CES Yard: 6.00 AM Arrive At Destination /2:55 particle At Customer: 8:00 AM Begin Unloading: Begin Loading: 8:15 AM Finish Unloading: 2:00 particle At Customer: 11:00 AM Leave Destination: Leave Customer: 11:15 AM Arrive At CES Yard: 12:55 Particle At CES Weight: 1:00 Begining Odometer: 1916/7 Total Hours: 1916/7 Total Miles: 1916/7 Total Miles: 1916/7 Total Miles: 1916 Driver: Soto, Andre Tractor #: 104 Tote #: 105 Box #: 105 Comments/Equipment: 105	Client: _	Arthur	rporation - Port			nmental Services, In
Arrive At Customer: 8:00 AM Begin Unloading: Begin Loading: 8:15 AM Finish Unloading: 2:00 pm Finish Loading: 11:00 AM Leave Destination: Leave Customer: 11:15 AM Arrive At CES Yard: 12:55 Px Customer PO #: Gross Weight: Ending Odometer: 191809 Tare Weight: Begining Odometer: 1916/7 Net Weight: Total Miles: 192 Driver: Soto, Andre Tractor #: 104 Tote #: Signature: Audre Soto Trailer #: Box #:	· -	•	ental Services, Inc	-		
Gross Weight: Ending Odometer:	Arrive At C Begin Load Finish Load	Customer: 8 : ding: 8 : ding: 11 :	00 AM 15 AM 00 AM	Begin Uni Finish Un Leave De	loading: loading: stination:	2:00 pm
Tare Weight: Begining Odometer: 1916/7 Net Weight: Total Miles: 192 Driver: Sato, Andre Tractor #: 104 Tote #: Signature: Andre Sata Trailer #: Box #:	Customer	PO #:	Tota	1 Hours:		CES Unload:
Net Weight:	Gross Wei	ght:		Ending C	dometer :	191809
Driver: Soto, Andre Tractor #: 104 Tote #:	Tare Weigh			Begining	Odometer	: 1916/7
Signature: Andres Solo Trailer #: Box #:	Net Weight	5	······································	Total Mile	es :	192
ob Comments/Equipment :	Driver: S	oto, Andre	Tri	actor # : 104		Tote # :
	ob Comments/N	Equipment :				
White (CES Office) Yellow (CES Office / Blilling) Pink (CES Office / IFTA) Golden Rod (Custom					5	Golden Rod (Custor



Invoice

Date	Invoice #
2/23/2009	54316

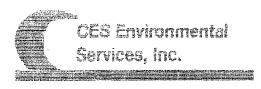
10	15	6	9 T	
			9	

Bill To: Afton Chemical Corporation

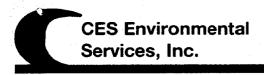
Attn: Jauming Chen 4245 Savannah Ave.

		P.O. No.	Terms	Pro	oject
			Net 30		
Quantity	Description	1	Manifest #	Rate	Amount
	2/3/09	:			
6	· ·	.00 per hour		75.00	450.00
	10.5% Fuel Surcharge			47.25	47.25
2	Disposal of Non-RCRA Material (oily @ \$175.00 per tote	absorbent)		175.00	350.00
	1% Compliance Fee			8.47	8.47
•					
!					
	CES job #80681				
Ve appreci	ate your business!		Subtotal		\$855.72
	nt Policy: Any unpaid balances begining or ue will accrue a per annum interest rate of 7		Sales Tax (8.	25%)	\$0.00
	ormalized contract.		Total		\$855.72

Ple	ase	print of type. (Form designed for use on elite (12-pitch) typewriter.)		<u> </u>					n Approved	. OMB NO.	2050-003
\prod		NIFORM HAZARDOUS 1. Generator ID Number WASTE MANIFEST	2. Page	1 of 3. Emerge		e Phone 9-6727	4. Manifest		124	8 J	JK
	16.7	Generator's Name and Mailing Address Those Charmicost Congressifican - Front Artista	State 10	After C	hemical C	orperation	an mailing addres				
		243. Sewerneit Ave. on Artur, TX 77540			overnein/ dust, TX						
Ш		enerator's Phone: (403) \$33 \$727 Transporter 1 Company Name			ne da el P Al Maria	(409) 50	リーペプタフ U.S. EPA ID I	Number		· · · · · · · · · · · · · · · · · · ·	
		ES Environmental Services, Inc.		SI	ate ID	EDENE	TXD	0089	0461		
	7.	Transporter 2 Company Name					U.S. EPA ID N	Number			
	100	Designated Facility Name and Site Address Control Control Services Fre. SPA Criega Rd.		5	ate ID	WKW.	U.S. EPA ID N	Number			
	1.	ouston TV, 27021 cility's Phone: (213) 676-1460					TXO	O()339	50461		
	9a HN	a. 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class	s, ID Number,		10. Conta	ners Type	11. Total Quantity	12. Unit Wt./Vol.	13.	Waste Code	es
 22		Non RCRA Non DOT Regulated Material (City Absorber	10)		7	72	DAO	Ţ	æ	11.1	
GENERATOR			ing the second and		2		800		003	£5 ar	1
ENER SERVICE		2.			Taga da A			W. T. A			
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÷		3.									
	1.41										
		4.1						ş			
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	14.	Special Handling Instructions and Additional Information	CE5 Job	\$ - (10)681							
	i,	Production waste 1 HOU-3104 2)	3)								
	15.	GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the co									
		marked and labeled/placarded, and are in all respects in proper condition for Exporter, I certify that the contents of this consignment conform to the terms I certify that the waste minimization statement identified in 40 CFR 262.27(a)	of the attached EPA Ack	nowledgment of	Consent.			ir export sn	ipment and i	am the Prim	ary
	Ger	nerator's/Offeror's Printed/Typed Name	<u>` </u>	Signature	1/1	gr ⁱ	-374		Mor	nth Day	Year
<u>↓</u>	16.	International Shipments	<u></u>	<u>*177A</u>	Cal-			1 2			127
I.L	Tra	import to U.S. ansporter signature (for exports only):	Export fro	om U.S.	Port of er Date leav						
E		Transporter Acknowledgment of Receipt of Materials nsporter 1 Printed/Typed Name		Signature		<u> </u>	And Annual Control	<u> </u>	Mon	th Day	Year
P. P.	7	Audres Se70		1424	Land	Buss	Ja		12	3	109
TRANSPORTER	Trai	nsporter 2 Printed/Typed Name		Signature					Mor	oth Day	Year
<u> </u>	18.	Discrepancy				<u> </u>					_
	18a	a. Discrepancy Indication Space Quantity	Туре		Residue		Partial Reje	ection		Full Reje	ection
				Manif	est Reference	Number:					
ΙŢ	18b	o. Alternate Facility (or Generator)					U.S. EPA ID N	lumber			
FAC	Fac	sility's Phone:					1				
DESIGNATED FACILITY	18c	: Signature of Alternate Facility (or Generator)							Мо	nth Day	/ Year
SIGN	19.	Hazardous Waste Report Management Method Codes (i.e., codes for hazardor	us waste treatment, disp	osal, and recycli	ng systems)						
尚 -	1.	2		3.			4.				
		Designated Facility Owner or Operator: Certification of receipt of hazardous ma	aterials covered by the m		noted in Iter	n 18a				oth Do	V
	Prin	ted/Typed Name		Signature	Jac		Kerson		Moi	nth Day	Year
EPA	For	rm 8700-22 (Rev. 3-05) Previous editions are obsolete.							RANSPO	RTER'S	COPY



Folder II): Afton Chemical Corp (Afton - Port Production waste		
Date: 2/3/2009	wanitest # :	m #Million in The Pay and a state of a state of a state of a state of the state of
Afton Chemical Corporation - Port Client: Arthur Phone: 4099896727	Ticket: Consignee:	80681 CES Environmental Services, Inc.
Transporter: Signature CES Environmental Services, Inc.	Signature	
Leave CES Vard: 8.304M Arrive At Customer: 11:20 AM Begin Loading: 11:25 AM	Arrive At Begin Uni Finish Un	
Finish Loading: 1640 Am Leave Customer: 1675 Am		stination : 2:25 CES Yard :
Customer PO #: Total	Hours;	CES Unioad:
ings Waight :	_	Odometer : /06340
Tare Weight: Net Weight:	rotal Mili	Odometer : <u>/ 66/24</u> es : <u>2/6</u>
Oriver: Soto, Andre Tra	ctor#:## /03	
signature: Audres Seto Tra	ailer#: 🎉	Box # :
ob Comments/Equipment : P/U TWO TO	Tes	
From AFTon C	inemical.	



4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460 Date Invoice # 2/23/2009 54315

Invoice

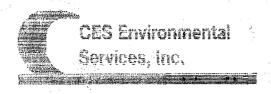
Fax: (713) 676-1676

Bill To: Afton Chemical Corporation

Attn: Jauming Chen 4245 Savannah Ave.

		P.O. No.	Terms	Project		
			Net 30			
Quantity	Descript	ion	Manifest #	Rate	Amount	
	2/2/09					
9	Transportation services by CES @	\$75.00 per hour		75.00	675.00	
	10.5% Fuel Surcharge			70.88	70.88	
3,000	Recycling of Non-RCRA Water (oi	ly water) @ \$0.12 per gallon	5591176ЈЈК	0.12	360.00	
	1% Compliance Fee			11.06	11.06	
* .						
				**		
	CES job #80682					
Ve appreci	ate your business!		Subtotal	:	\$1,116.94	
	nt Policy: Any unpaid balances begining will accrue a per annum interest rate		Sales Tax (8.2	25%)	\$0.00	
	ormalized contract.		Total		\$1,116.94	

Ple	ase p	orint or type. (Form desig	ned for use on elite (12-pite	ch) typewriter.)			<u> </u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Approved	OMB No.	2050-0039
\prod	UÑ \	IFORM HAZARDOUS WASTE MANIFEST	Generator ID Number		2. Pa	, (4	ency Response ()9) 989	000		559	1117	6 <u>J</u> .	JK
	42	Senerator's Name and Mallir Ion Chemical Corport 4 5 5 warmsin Ave Int Anthur, TX 77640	ig Address scion - Part Arthur	Be	≫ ID:	4245	s Site Address Internació Co Securio III A Struck IX 7	¥£	nan mailing addres	s)			
	Ger	nerator's Phone: (40%)	989-6727					(409) 989	⊬6727 U.S. EPA ID N	lumbar			
	0	ransporter 1 Company Nam	_{kal} Ser vices , Dec			Si	ate ID	(XXCD)		10895 10895	0461		
	7. T	ransporter 2 Company Nam	10						U.S. EPA ID N	lumber			
	49	esignated Facility Name an School connected Sec Of Grigos Rd	d Site Address v icea. ਵਿਵ			51	ale ID	10900	U.S. EPA ID N	lumber			
	1.	uston: TX, 77021 ility's Phone: (713) 676-1460			10.00			TAL	000995	0461		
	9a. HM	1 15 11 6 77	on (including Proper Shipping N any))	ame, Hazard Class, ID	Number,		10. Contair No.	ners Type	11. Total Quantity	12. Unit Wt./Vol.	13.	Waste Code	S
GENERATOR -		Rom-RCRA/Nem-D	OT Regulated Water (C	The monter)	ang Apiran Pangana Panganan			1115	3000	8	700 - 200	algod¶	-1
- GENE		2,			wee, Middle Str - Middle Str - Galland Str							740	
		3.											A %
											100	pn	
		4.											
	14	Special Handling Instruction	s and Additional Information	· · · · · · · · · · · · · · · · · · ·	100 100 100 100		. 1 +			المعصيير	-	and the second	
			issal Corp (Afton - Port	detray)		t # - 80662)	Ball	a f	CAdi CAdi	n) Han7	45		
	15.	marked and labeled/placar Exporter, I certify that the c	R'S CERTIFICATION: I hereby ded, and are in all respects in pontents of this consignment co imization statement identified in	proper condition for tran	sport according t e attached EPA	applicable international	itional and nation	onal governn	nental regulations.				
		erator's/Offeror's Printed/Typ	ped Name			Signature	01				Mor	nth Day	
I.L	16.1	nternational Shipments	Import to U.S.		Export	from U.S.	Port of ent						
品	17. 1	ransporter Acknowledgment	t of Receipt of Materials			0:						9. D.	
TRANSPORTER	14	sporter 2 Printed/Typed Nar				Signature Signature	ne s	Sol	6		Mon Mor		Year Year
<u> </u>	18. [Discrepancy											
	18a.	Discrepancy Indication Spa	ce Quantity	Π	уре		Residue fest Reference	Number	Partial Reje	ction		Full Reje	ction
DESIGNATED FACILITY		Alternate Facility (or Genera	ator)						U.S. EPA ID N	umber			
ATED F		ity's Phone: Signature of Alternate Facili	ity (or Generator)					: 1			Мо	nth Day	/ Year
Sign	19. H	lazardous Waste Report Ma	anagement Method Codes (i.e.,	codes for hazardous w	aste treatment, d	isposal, and recycl	ing systems)						_
٦		H 141_				3.			4.				
		Designated Facility Owner or ed/Typed Name	r Operator: Certification of rece	pt of hazardous materia	als covered by the	manifest except a Signature	s noted in Item	18a			Mor	nth Day	Year
		NAM 60 V	ر _{مر د}			Oignature	- C,	2				ر ا	
EP/	Forr	n 8700-22 (Rev. 3-05) P	revious editions are obsole	te.						TR	ANSPO	RTER'S	COPY



Folder ID: Aften Chemical Corp (Afton - F	ort Arthur)		
Date: 3 2/2/2009	Wanifest # :	A The state of the	
Aften Chemical Corporation - Port Client: Arthur	in municipal de la company de	81632	
Phone: 4099896727	. She same a success of the	CES Environ	mental Services, Inc.
CES Environmental Services, I	Consignee : nc.	And the second s	
Signature # OL	Signature		
Loave CES Yard: 10.00	Arrive At	Destination	600 pm
Arrive At Customer: 12:00 PM	To the state of th		
Begin Loading: 12:20 PM	Finish Un	-	700pm
Finish Loading: 4:00 Pm	erve Det	omanom. CES Vard:	(8 - Ona
Leave Customer & 4.15 Pm		urs idiu.	6500 X-1
Customer MOH:	eal Hours:		CES Inicad:
Gress Weight : 197	Ending O	dineter:	186987
Tare Weight:	Cegining	Odometer:	• •
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	Tractor#: 世 10	<u>4</u>	one # :
Signature Andres Solo	maier#:	THE STATE STATE STATE OF THE STATE S	
lob Comments/Edgsipment			
PUMP OUT OILY	Water Fr	om	. ,
water seperati	0. T		Harring, Pilater, Miller (1914) (1914
white (GES Office /	Billing) Pink (CES	OMice / (FTA)	Golden Rod (Customer)



COPY

Invoice

Date	Invoice #
2/2/2009	53773

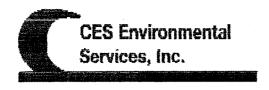
4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676

Bill To:

Afton Chemical Corporation

Attn: Jauming Chen 4245 Savannah Ave.

			P.O. No.	Terms	Pro	oject
				Net 30		
Quantity		Description		Manifest #	Rate	Amount
5	12/17/08 Transportation services t @ \$75.00 per hour	by CES to deliv	er 4 open top totes		75.00	375.00
	18% Fuel Surcharge		:		67.50	67.50
4	Sale of cubic yard sacks	@ \$35.00 each			35.00	140.00
	1% Compliance Fee				5.94	5.94
	CES job #78085					
e appreci	ate your business!			Subtotal		\$588.44
count is c	ent Policy: Any unpaid balan due will accrue a per annum i	nces begining on the interest rate of 7.5	the 30th day after the 5%, unless otherwise	Sales Tax (8	.25%)	\$11.55
ated in a f	formalized contract.			Total		\$599.99



Transportation Work Ticket

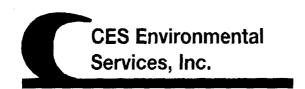
Folder ID: Afton Chemical Corp (Afton - Port Arthur)

	Production wa	nste			
Date :	12/17/2008		Manifest #:	42535	324
Client : Phone :	Afton Chemical C Arthur Stepl 4099896727		Ticket:	78085 CES Environme	ental Services, Inc.
Transport	er: <u> </u>	mental Services, Inc.	•• ·	who save the control of the control	
Signature	AFRICA		Signature		
Leave CE Arrive At	S Ýard : ↓↓ Customer :	:30	Arrive At Begin Uni		
Begin Lo	ading:		Finish Un	loading:	
Finish Lo	oading:		Leave De	stination:	
Leave Cu	stomer:		Arrive At	CES Yard: _	_16:30_
Custome	er PO #:	Total	Hours:		CES Unload:
Gross W	eight :		Ending C	dometer :	109 14
Tare Wei	ght:		Begining	Odometer :	91749 10893
Net Weig	fit:		Total Wil	es:	_208_
	Compaye Si		ctor#:2000 20	•	e#:
Signature :	- Amot	Tr	ailer # : <u>217</u>	Bo	x#:
ob Comment	s/Equipment	minguez			
De	elivered	4 Oper	top tote	s (m/296	(X5)
				1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	***************************************
	-			· · ·	
B25.		e de la companya de			
White (C	ES Office)	Yellow (CES Office / Billin	ig) Pink (CE:	S Office / IFTA)	Golden Rod (Customer)



JOB INFORMATION PROFILE

Folder ID :	Afton Chemical Corp (Afton - Port Arthur) Production waste	Driver: Sander Jose
Customer	: Afton Chemical Corporation - Port Arthur	Driver : Senate
Address	: 4241 Savannah Ave	Helper:
City,State,Zip	: Port Arthur TX , 77640	Date: 12/17/2008 Time: 2nd
CES Contact	:() -	Truck# 294 Trailer # 217
Job Desc	eription:	۸/
Site contact: St	ephen Couch 409.989.0604	J
Deliver the follo	wing:	73
4 cut top totes v	vith sacks 10000	
Pick up the follo	wing:	/
Manifest - 2 totes of oily	absorbent [CES # 3104] 78085	•
- 2 lotes of only a	absorberit [CES # 3104]	
Return to CES	and check into processing facility.	
They will be lo	pading 2 of the 4 totes with the material that you are	e bringing back
ID #:	78085	
CUSTOM	ER INFORMATION	•
OPERATION HO		AFTER HOURS CONTACT:
Open :	Name:	Name:
Close:	Number:	Number:
RECEIVIN	G INFORMATION	
OPERATION HO	DURS: SHIPPING/RECEIVING CONTACT:	AFTER HOURS CONTACT:
Open :	Name:	Name:
Close:	Number:	Number:
PURCHASE ORD	DER NUMBER REQUIRED: YES NO	
	IF YES, P.O. #:	
PPE REQUIRED:	☐ YES ☐ NO	NACSC REQUIRED: YES NO
IF YES, W		IF YES, WHAT?
CAN CUSTOMER	LOAD US: YES NO	WASHOUT ANTICIPATED: YES NO
ROPPER PUMP:	YES NO	BOX LINER REQUIRED YES NO
LOADING/UNL TRAILER T		
BOX NUMBER:		



Waste Pre-Acceptance/Approval Letter

Date 12/5/2008

Dear Jauming

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3103

Expiration Date 12/5/2010

Generator: Afton Chemical Corporation - Port Arthur

Address: 4241 Savannah Ave

Port Arthur, TX 77640

Waste Information

Name of Waste: Oily water TCEQ Waste Code #: Recycle

Container Type:

Detailed Description of Process Generating Waste:Oily water from API Separator at oil additives plant

Color: brown

Odor: hydrocarbon

pH: 3-11

Physical State:

Incompatibilities: oxidizers

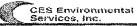
Safety Related Data/Special Handling:

standard PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. May he on emulsion.



4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676 http://www.cosenvironmental.com TCEQ Industrial Solid Wastu Permit Number: 50948

U.S. FPA ID Number: TX0008850461 (SWR Number: 20900

fo

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31.5

SECTION 1:	Generator	<u>Informațic</u>	in										
Company:	Afton Chea	ecal Corpo	ration										
Address:	4245 Savar	nah Ave		734							***************************************		Alghan mark
City:	Port Arthur				State:	TX		Zip:	77640)-36E8			
Contact:	Jauming Ch	A				Title:		Operation	s Super	intenden	1		
Phone Num	tber:	409-989	-0602			Fax Numb	er:			and the second second	*********		
24/hr Phon	e Number:	832-444	W-1-46	Yai dayaa				£1					
US EPA ID C		TXROCO				•							
State ID No	k:	CESQG				SIC Code:	go consense	·	e transport (Comme		***************************************		en a proper
			- 1077 - No 100 - 100							y like comercia			
SECTION 2:	Billing Info	mation.	Sar	ne as A	bave								
Company:													
Address:							MAT 19. 02.0				The same	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
City:	590727		***************************************		State:			Zip:	M*************************************		· · · · · · · · · · · · · · · · · · ·		Miller of the Control
Contact:		, A	***************************************			Title:				entered to the same			
Phone Nun	ahar		««»	TAKE		Fax Numb	-76				***************************************		-
Litone ison	1961					, I GA I I CITIL		*****					,
SECTION 3:	General De	scrintian :	of the Wash	ps.									
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	escription of		***************************************	Mache		Oity vosta	tro	m API Sepa	s ator a	t o'd addur	was olant		-
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er og det med med med et en er					A		State e-					OC	
		Order described		*		*****		100			****		
Physical St	ates Ti	Liquid		-	Sludge			Powder					
HINZICH DE	are:	Solid			Filter Cake		=	Combinat	ina				
		30110		-	1 44 6501 67 0150	•		60///01/10/					
Pinton.	beautic					Odor:		hydrocart	nee				
Colos:	prown					00011		Try O. Octor	30:1			*****	99.55.50
e nacitia eta	anika fuantan	-11.	0.9-1					Density:	75.8	.34 lbs	(est		
20ecur or	avîty (water	-1):	0.5-1			**		Deliatey	7.3-0		(Pres)		
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noes this i	nateum cou	tam any w	scar braciona	c comp	edites:	i1	103		2 1417				
State of the second			culoctitu	tad ah	annlie east	mauade7		$\overline{}$	Yes	V No			
Does this f	naterial con	tain any p	ara substitu	rea bu	Burnst folk	pounes:			163	151 140			
					a alection	a isa eco t	1	es tubus	~ EEL	Г	Yes		No
is the was	te subject to	the benz	ene waste c	peracc	an mesnar	1 (40 CFK)	art.	DI, SUDJAI	itera Sasata	1200	~		1912
	es" if your w									: 1080W#1; 2824			2834
281			3816	2819			2822				2833		
283			2841	2842			2844			2861	2869		2860
287			2876	2879		1	289,	289	·3	2896	2899		2911
331	2 495	53	4959	9511									
	[2] Si	anla ubza	e 🗔	B.21.15*	i-phase								
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Container	Туре:	Orum	Total	· 3	Truck [Other (ex	cplai	in)					
Éromiostu	r: 🗌 Week	(v 🗔 Ma	onthly [7]	Yearly	One-	Time							
Quantity:	r and remain	- A 1917	· · · · · · · · · · · · · · · · · · ·	1									

		us Waste" per 4 plete, sign and d			Yes bus Constitue	No No No nts Form attached hereto				
	tic for Toxic N	DJOS (sgnitable Metals: Mganics: DO12 t	□ 0004 □ D010	∏0005 ∏0011	DCD6	. 0003 (Reactive) 6	<u> </u> 2009			
		d waste or mixe		· ?	T) Yes	. ⊋ No		Cr.		
is this a con 40 CFR 261.	nmercial prod 33(e) or (f)?	st At Lapplicable duct or spill clea st ALL applicable	nup that w	ould carry a		aste code under				
Texas State	Waste Code	Number:		Recycle	F 1972-5					
Proper US t Class:	NA NA	_	Non RERA/I NA		plated Water NA	RQ: NA	÷.	PROFESSION AND ADDRESS OF THE PARTY OF THE P		
Flast	Point	pH	**************************************	Reactiv	e Sulfides	Reactive Cyanides	Salic	, , , , , , , , , , , , , , , , , , , 		
>	140	3-11	C Walter Land	BRL	rug/l	BRL mg/l	<1	98		
Oil &	Grease	TOC		Z	inc	Copper	Nick	el		
>1500	<u>mg/</u>	<10000	me/i	BRL	mg/l	BRL mg/l	BRE	<u> </u>		
SECTION 4:		Chemical Data APONENTS TAB	LE		98-10-10-10-10-10-10-10-10-10-10-10-10-10-	CONCENTRATOIN		UNITS		
751		ses of the follow		is		Ranges are acceptable				
		Water		3			%			
	Assa	Oil				1-15 0-1%		%		
		Solids				95				
		CALORES AND AND ADDRESS OF THE PARTY OF THE				Attatation of the same of the		1/2000 - 1/2		
						And the state of t		***************************************		
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	9000					THE STATE OF THE S		Action Control of the Control		
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	The state of the s					O 8024 in f				
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L					···			Action to a graph was a bid or		

SECTION 5: Sai If the handling standard PPE		ed Data Ste requires the u	use of special pi	roteciiva equ	ipment, please	explain.	
	nts, nates	sporting Docume , data and/or ana none		to this form a	s part of the wa	3vie	
SECTION 7: Inc Please list ALC : oxidizers							
Laboratory ana	Hysis of th	. <u>Knowledge Docu</u> e hazardous wasi g generator know	te characteristi	cs, listen belo	w,WAS NOT PE	RFORMED	Total Carlot Car
TCLP Metals:		NA					
TCLP Volatiles:		NA		STATE OF THE STATE		The state of the s	
TCLP Semi-Vola		NA					
Reactivity:		NA	***************************************			N.W.104.	**************************************
Corrosivity:		NA		YIAN.			
Ignitability:		NA				N	
	ste Receipl	Classification Lind	er 40 CFR 437 (F	rtaining to Pre	-Ireatment Req	uirements to	or Centralized Waste Treatment
Facilities)	shie mater	ial a wastewater or	wastewater du	dae?		<u></u> ₹55	□ NO
-		complete this section					1, 1, 1, 1

PL	EASE CHE	CK THE APPROPRIA	YE BOX. IF NO A	<i>IPPROPRIATE</i>	CATEGORY, GO T	O.THE NEXT	PAGŁ.
M Cr	neme electrical timishing commande with pollution open the moduli commande communities and com	oplating baths and, any rinse water and asses control blow dewn ting solutions wastewaters	sludges i water and slud ster than 136 mg without metals ireparation soluter	ç/i Gans from elec		osphating op	erations
	sed oils ill-water er ubricents potents ontennat	rt 8 noisions or mixture ed groundwater da eum products		roleum source	٤		
o o	lii spill claa ilge water		leum sources				

Interceptor wastes
Off-specification fuels
Undergraund storage remediation waste
Tank clean out from petroleum or oily sources Non-contact used giycols
Aqueous and oil mixtures from parts cleaning operations
Wastowater from oil bearing paint washes
Organics Subcategory: Support C
Landfill lesethate
Contaminated groundwater clean-up from non-petroleum sources Solvent-bearing wastes
Off-specification organic product
Still bostoms
Syproduct waste glycol
Wassewater from paint washes
Westewater from adjustings and/or epoxies formulation
Wastewater from organic chemical product operations
Tank clean-out from organic, non-petroleum sources
(3)
if the waste contains oil and grease at or in excess of 100 mg/l, the waste should be classified in the oils subcatagory.
(2)
If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in
excess of the values listed below, the waste should be classified in the metals subcategory.
Cadmium; θ.2 mg/L
Chromium: A9 mg/l.
Copper: 4.9 mg/L
Mickel: 37.5 mg/L
425
(3) If the master consider full and greate fact than 950 me/L and does not have a remove the constant of medium.
If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromhom, copper, or sickel above any of the values listed above, the waste should be classified in the organics subcategory.
After above any or the values raised above, the waste should be reposited in the organics subcategory. Westa's Subcategory.
☐ Oils Subcategory
Organics Subcategory
FFOWERS St. A. A. Francis I and C.
SECTION 10 Additional Instructions
If you cannot determine the correct subcategory in Section Band you did not furnish data for the consensation of Cadmium, Chromium,
Copper, Nickel, and Oil and Grease, CES will send offset to a commercial laboratory a sample to determine these concentrations. This
will be prior to acceptance. The generator will be responsible for the cost of the analysis.
SECTION 11: Generator's Certification
The information contained herein is based on 💮 generator knowledge and/or 🗀 analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of
my knowledge and ability to determine that no deliberate or willful omissions of composition
properties exist and that all known or suspected hazards have been disclosed. I certify that the
materials tested are representative of all materials described by this document.
5 . 1 H / F / Son 8
Authorized Signature: Date:
Printed Name/Title: Jauming Chen. Site Super intendent
Authorized Signature: Olden Date: 11/17/2008 Printed Name/Title: Jauning Chen, Sito Super intendent
CES USE ONLY (BO NOT WRITE IN THIS SPACE)
Compliance Officer: Valudad Tland
Date: 17-5-00 Rejected Rejected
Angroval Mumber 3103
The state of the s

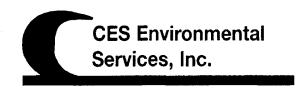


PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
\$0.12/gal + trans+fsc
2. Contamination Limit (maximum limit before surchages apply):
Std
3. Surcharge Pricing:
Std per rate sheeten shared drive
4. Special Testing Requirements:
Sti TOC, pt, prenol, metals, 70 oil, 70 solids; emulsion yes or no - May need to go to heat tank to break emulsion.
5. Treatment and Handling Protocol:
SUB Cut B. water - Heat tank processing for emulsion oil removal.
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A Subcategory B ☐ Subcategory C



Tests for Produ	uct Recovered/Recy	cled (if applicable	:):		
Management 1	or Product Recovere	ed/Recycled (if a	pplicable)		
Management 1	or Product Recovere	ed/Recyc	led (if a _l	led (if applicable)	led (if applicable)



Waste Pre-Acceptance/Approval Letter

Date 12/5/2008

Dear Jauming

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3104

Expiration Date 12/5/2010

Generator: Afton Chemical Corporation - Port Arthur

Address: 4241 Savannah Ave

Port Arthur, TX 77640

Waste Information

Name of Waste: Oily Absorbent TCEQ Waste Code #: CESQ3011

Container Type:

Detailed Description of Process Generating Waste:

Oily Absorbent pads, rags, Filters, & debris from oil additives plant

Color: Brown

Odor: Hydrocarbon

pH: 3-11

Physical State:

Incompatibilities: oxidizers

Safety Related Data/Special Handling:

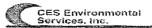
Standard PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.





4904 Griggs Road, Houston, TX 77021
Phone: {713} 676-1460 Fax: (713) 676-1676
http://www.caseiwnosmental.com
TCEQ Industrial Solid Waste Permit Number: 31948

(SWR Number: 30900

U.S. EPA IO Number: TXDf08950461



SECTION 1: Generator Information Company: Afton Chemical Corporation 4265 Savannah Ave Address: State: City: Port Arthur Zip: 77640-3668 Title: Operations Superintendent Contact: Jauming Chen 409-989-0602 Fax Numbers Phone Number: 24/hr Phone Number: 832-444-2043 US EPA ID No: TXR0C0043414 State ID No: SIC Code: CREQU Same as Above SECTION 2: Billing Information -Company: Address: City: State: Zip: Title: Contact: Fax Number: Phone Number: SECTION 3: General Description of the Waste Name of Waste: Ony Absorbent Oily absorbent Pacs, Rags, filters, &debris from Detailed Description of Process Generating Waste oil additives plant Physical State: Liquid Sludge Powder Combination Solid | Filter Cake Odor: hydrocarbon Color: brown Density: NA lbs/gat Specific Gravity (water=1): NΑ ☑ No. Does this material contain any total phenolic compounds? Does this material contain any para substituted phenolic compounds? ☑ No Yes Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ No Answer "Yes" if your waste contains benzene AND if the SIC code from your facility is one of the following: 2823 2824 2834 2819 2821 2822 2812 2813 2816 2857 2861 2865 2869 2844 2835 7841 2842 2843 2874 2876 2879 2391 2892 2893 2896 2850 2911 2873 4959 9511 3312 4953 ☑ Single-phase Multi-phase Drum Tote Truck Other (explain) Container Type: Frequency: Weekly Monthly Yearly One-Time Quantity:

is this a USEPA "Hazard if "Yes", then please co				☐ Ye rdous Constitue				
If "Yes", Is it: [Characteristic for Toxic Characteristic for Toxic		∏ D004 ∭ D016	0005 0011		∏ 0003 (Read 6		<u></u> 00000	
Is this an "F" or "K" List Id "Yes", then please			2	□ Ye	s 🗵	No	4.77	
is this a commercial pro 40 CFR 261.33(e) or (f)? If "Yes", then please		<u> </u>		a "U" or "P" w J No	vaste code ur	nder		with the same of t
Texas State Waste Code	• Number:		CESQ-301	<u> </u>				
Proper US DOT Shippin Class: NA	g Name: UN/NA:	Non RCRA/(Non 00 TR:	egulated Wast NA	e RQ:	NA	 w	and the second s
Flash Point	ρ	Н	React	ve Sulfides	Reactive	Cyanides	Sol	ids
>140	3-		NΛ	mg/)	NA	Ngm	100	%
Oil & Grease >1500 mg/l	NA TO	og/l	NA NA	Zine rng//	NA Cop	ng/l	Nic NA	ket mg/l
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The second secon	sists of the folk		3\5		Ranges are a	**************************************		or %
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	Oil				10-			96
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SECTION 5: 5	afety Rela	<u>ted Data</u>				
if the handlin	g of this w	aste requires the o	ise of special protective	equipment, please	explain.	
standard PPE	-					
		**************************************				1.50 to 1.50 t
790320 <u>40-40-40</u>					PAT	
SECTION 6. O	teachad S	upporting Docume	n ಚಿಕ್ಕ			
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approva) paci	Kage.	none				
4	47				ngghagania an	- 19 C
			7°		<u></u>	C. J. Charles and C. L. Charles
SECTION 7: 1	ncompatib	<u>ilities</u>				
Please list AL	L incompat	idilities (if any):				
oxidizers						
- Pagggananan aga		770-64	A Continue of the Continue of	Part Constant		
			7.1		***	
		s Hnowledge Docu				
			te characteristics, listed	below,WAS NOT PE	RFORMED	
based upon t	he followin	ig generator know	rledge:			
TCLP Metals:		NA		The state of the s	C-10000	
ICLP Volatile	5."	NA		Sand Market Control		120.00
TCLP Semi-Vo	platties.	NA	And the second			
Reactivity:		NA				
Corresivity:		NA				
Ignitability:		NA	-17-24			
Rintennek						**************************************
SECTION 9: W	aste Recein	st Classification Und	ler 40 CFR 437 (Prtaining	to Pre-Treatment Requ	oirements for Centraliza	d Waste Treatment
Facilities)		Calago				
	ls this mater	rial a wastewater or	r westewater sludge?		T YES T NO	
	If 'Yes'.	complete this section	On			
	DI FASE CUE	AIGGTBBBA SHE WA	TE BOX. IF NO APPROPE	ATE CATEGORY, GO TO	n THE NEXT PAGE	
,	LUENDE CITE	CR 11/4 SCENSENSO	THE BOAR IN HOTE THOSE	Art enterent, ac ,	\$ 1100 100 100 100 100 100 100 100 100 1	
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	Chromate v					
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	Used oils					
		mulsions or misture	es es			
32000	Lubricants					
	Coolants					
			ean-up from potroloum v	purces		
		leum products				
<u></u>	Oil spill cle					
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نسا	Ultracit Assets	i waters it dist hereo	MCD/II ZUM/CEZ			

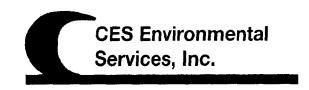
	Interceptor waste:
	Off-specification fuels
-	Underground storage remediation waste
	Tank clean-out from petroleum or only sources
	Non-contact used giycols
	Aqueous and oil mixtures from parts cleaning operations
\$ 100 mm	Wastewoter from oil bearing puint washes
	<u>softegory</u> : Subpart C
) Landfill (eachate
 	Contaminated groundwater dean-up from non-petroleum sources
ينا ا	Solvent-bearing wastes
<u> </u>	Off-specification organic product
F	Still bottoms
ļ	Byproduct waste given
	Wastewater from paint washes
, june	Wastewater from adhesives and/or opoxies formulation
jum .	Wastewater from organic chemical product operations
Saa	j Yaak olean-out from organic, non-petroleum sources
(1)	
142	If the waste contains oil and grease at or in excess of 20 mg/t, the waste should be classified in the oils subcroegory
	and the on section of the control of the control of the control of the one section of the
(2)	
,,	If the waste contains oil and grease less than 100 mg/L, and has any of the podutants listed below in concentrations in
	excess of the values listed below, the waste should be classified in the metals subcategory.
	Cadmium: 0.2 mg/L
	Chremium: 8,9 mg/L
	Copper: 4.9 mg/L
	Nickelt 37,5 nag/L
(3)	
	If the waste contains all and grease less than 130 mg/L, and does not have concentrations of cadmium, thromium, copper,
	or rickel above any of the values listed above, the waste should be classified in the organics subcatugory.
	Metals Subantegory
	Oils Subcaregory
	Crganics Subcategory
EE/TIMEI SE	Additional Instructions
SECTION 10	RESIDENTIAL
li voo sannol	t determine the correct subcategory in Section Sand you did not furnish gata for the concentration of Cadmium, Chromism.
	el, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This
wis ge prior	to acceptance. The generator will be responsible for the cost of the analysis
CCCTICAN 12	: Generator's Certification
	tify that the above and attached description is complete and accurate to the best of
my knowled	ige and ability to determine that no defiberate or willful umissions of compostion
proporties e	exist and that all known or suspected hazards have been disclosed. Frentify that the
materials te	sted are representative of all materials described by this document.
	0 26
Authorized	Signature: Date: 17/2008
	signature: Date: 11/17/2008 me/Title: Tauming Chen, Site Superintendent
Printed Nar	merrine Tauming Chen Site Superintendent
Little Hadi	Taraway Cheeps, Sing Stages 110 de Care Cheeps
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LES USE UN	LY 100 NOT WRITE IN THIS SPACE)
	(1/ 10 18) 1
Compliance	Office: Your Thy
Date: 17	-5-08 Approved Rejected
Approval N	umber: 310 4
	V 175.



1. Base Pricing (including freight):
1. Base Pricing (including freight): \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
2. Contamination Limit (maximum limit before surchages apply):
3. Surcharge Pricing:
4. Special Testing Requirements:
5. Treatment and Handling Protocol:
Class 1 Bulk.
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



Tests for Product	Recovered/Recycled	(if applicable):	
Management for	Product Recovered/Re	ecycled (if applicable)	



Waste Pre-Acceptance/Approval Letter

Date 12/5/2008

Dear Jauming

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3103

Expiration Date 12/5/2010

Generator: Afton Chemical Corporation - Port Arthur

Address: 4241 Savannah Ave

Port Arthur, TX 77640

Waste Information

Name of Waste: Oily water TCEQ Waste Code #: Recycle

Container Type:

Detailed Description of Process Generating Waste: Oily water from API Separator at oil additives plant

Color: brown

Odor: hydrocarbon

pH: 3-11

Physical State:

Incompatibilities: oxidizers

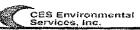
Safety Related Data/Special Handling:

standard PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. DR.



U.S. EPA ID Number: TX0008850461 SVVR Number: 10500

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oL

Company: After Chemical Corporation Address: 4245 Savanish Ave City: Port Arthur State: TX Zip: 27640-3658 Contact: Jauming Chem Title: Operations Superintendent Phone Number: 409-989-0902 Fax Number: 332-443-2643 US EPA ID No: TXR000043414 State ID No: CESOG SIC Code: SECTION 2: Billing information:
City: Port Arthur State: TX Zip: 7/640-3658 Contact: Jauming Chen Title: Operations Superintendent Phone Number: 403-958-0602 Fax Number: 332-444-2643 US EPA ID No: TX8000043414 State ID No: CESOG SIC Code: SECTION 2: Billing Information: Same as Above Company: Address: City: State: Zip: Title: Phone Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: City Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plans Physical State: Zi Liquid Sludge Powder
Contact: Jauming (files Title: Operations Superintondent Phone Number: 409-989-0602 Fax Number: 24/hr Phone Number: 303-989-0602 Fax Number: 24/hr Phone Number: 332-444-2043 US EPA ID No: TXR000043414 State ID No: CESQG SIC Code: SECTION 2: Billing Information Same as Above Company: Address: City: State: Zip: Title: Phone Number: Fax Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: Oily Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: Ziquid Sludge Powder Detailed Description of Process Generating Waste Odor: hydrocarbon Specific Gravity (water=1): O.9-1 Density: 7.5-8.34 lbs/gs Ooes this material contain any total phenolic compounds? Yes No No No No State Subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No State Waste Subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No
Phone Number: 409-989-0602 Fax Number: 24/14-Phone Number: 332-441-2043 US EPA ID No: TXR00004341-4 State ID No: CESCG SIC Code: SECTION 2: Billing Information : Same as Above Company: Address: City: State: Zip: Contact: Title: Phone Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: Cally Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: Liquid Sludge Powder Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Pensity: 7.5-8.34 lhs/gal Ooes this material contain any botal phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Answer "Yes" if your waste contains between API of the SIC code from your facility is one of the following:
24/hr Phone Number: 332/-444-2043 US EPA ID No: TX8003043414 State ID No: TX8003043414 State ID No: TX8003043414 SECTION 2: Billing Information
US EPA ID No: TKR000043414 State ID No: CESOG SIC Code: SECTION 2: Billing Information - Same as Above Company: Address: City: State: Zip: Contact: Title: Phone Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: Gity Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: I Liquid Sludge Powder Solid Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 hs/gsl Does this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAPP (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains benzene AND if the SiC code from your facility is one of the following:
State ID No: CESQG SIC Code: SECTION 2: Billing Information
SECTION 2: Billing Information -
Company: Address: City: State: Zip: Contact: Title: Phone Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: Gily Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: Liquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 lbs/gal Ooes this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains benzene AND if the SIC code from your facility is one of the following:
Company: Address: City: State: Zip: Contact: Title: Phone Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: Gily Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: Liquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 hs/gal Does this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Answer "Yes" if your waste contains between AND if the SIC gode from your facility is one of the following:
Address: City: State: Zip: Contact: Title: Phone Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: Only Waster Detailed Description of Process Generating Waste Dilly water from API Separator at oil additives plant Physical State: Liquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 hs/gal Does this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
City: State: Zip:
Contact: Title: Phone Number: Fax Number: SECTION 3: General Description of the Waste Name of Waste: Only Water Detailed Description of Process Generating Waste Oilly water from API Separator at 0% additives plant Physical State: Liquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 hs/gal Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes Answer "Yes" if your waste contains benzene AND if the SIC code from your facility is one of the following:
Phone Number: SECTION 3: General Description of the Waste Name of Waste: Only Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: I Liquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 hs/gal Does this material contain any total phenolic compounds? Yes I No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains benzene AND if the SIC code from your facility is one of the following:
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Name of Waste: Only Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: Ulquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 lbs/gal Ooes this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
Name of Waste: Only Water Detailed Description of Process Generating Waste Oily water from API Separator at oil additives plant Physical State: Ulquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 lbs/gal Ooes this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
Physical State: Liquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 hs/gal Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
Physical State: Liquid Sludge Powder Solid Filter Cake Combination Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 hs/gal Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
Physical State:
Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 lbs/gal Ques this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
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Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 lbs/gal Ques this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
Color: brown Odor: hydrocarbon Specific Gravity (water=1): 0.9-1 Density: 7.5-8.34 lbs/gal Opes this material contain any total phenolic compounds? Yes No Does this material contain any para substituted phenolic compounds? Yes No Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes No Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
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Specific Gravity (water=1): Open Specif
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Does this material contain any para substituted phenolic compounds? Yes Mo Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes Mo Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes Solve No Answer "Yes" if your waste contains beizene AND if the SIC code from your facility is one of the following:
is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) Yes Solve No Answer "Yes" if your waste contains beizene AND if the SIC code from your facility is one of the following:
Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
Answer "Yes" if your waste contains beiszene AND if the SIC code from your facility is one of the following:
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2835 2836 2841 2842 2843 2844 2851 2861 2865 4860
2873 2874 2876 2879 2891 2892 2893 2896 2899 2911
3312 4853 4959 9511

Layers: 🖓 Single-phase 🖸 Multi-phase
Contains Time II form III total II Copy (aughin)
Container Type:
Container Type:

ir res , then psease co		er 40CFR 261 Id date the Un		☐ Yes ardous Constitue	S		
					0003 (Reactive)		
Characteristic for Toxic	: Metals:	∐ 000 ∏ 001	4		5 D007 D008	∐ ⊅009	
Characteristic for Toxic	: Organics: DO:	12 thru D043	(please kst	all tnat apply)			
is this an "F" or "K" List If "Yos", then please			ie?	Yes	s 🖸 No		
is this a commercial pro 40 CFR 261.33(e) or (f) if "Yes", then please	7		-	ra "U" or "P" w I No	aste code under	- NS 53	A.C.
Texas State Waste Cod	e Number:		Recycle	the second of th			
Proper US DOT Shippin	_	Non RERA	/Nan DOT F	legulated Water	F		
Class: NA	UN/NA:	NA	_ PG :	NA	RQ: NA		
Flash Point	Flash Point pH Re		Reac	tive Sulfides	Reactive Cyanides	Sali	ds
>140 3-11			BRL	mg/i	BRL mg/l	<1	%
Oil & Grease	~~~~			Zinc Copper		Nic	cel
>1500 mg/l	<10000	me/i	BRI.	mg/l	3RL mg/l	BRE	mg/l
SECTION 4: Physical an	d Chemical Da						
€0							
42	OMPONENTS T	ABLE			CONCENTRATOIN		UNITS
The waste con	OMPONENTS T	ABLE	iais	1201	Ranges are acceptable		er%
The waste con	OMPONENTS I haists of the fol Water	ABLE	iais		Ranges are acceptable 85-95	100 300 E. L.	er% %
The waste con	OMPONENTS T	ABLE	iałs	TOTAL STATE OF THE	Ranges are acceptable	797 E. L. L.	er%
The waste con	DMPONENTS I assess of the fol Water Oil	ABLE	iais	100 to 10	Ranges are acceptable 85-95 1-15		er % % %
The waste con	DMPONENTS I assess of the fol Water Oil	ABLE	iais		Ranges are acceptable 85-95 1-15		er % % %
The waste con	DMPONENTS I assess of the fol Water Oil	ABLE	lais		Ranges are acceptable 85-95 1-15		er % % %
The waste con	DMPONENTS I assess of the fol Water Oil	ABLE	lais		Ranges are acceptable 85-95 1-15		er % % %
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The waste con	DMPONENTS I assess of the fol Water Oil	ABLE	lais		Ranges are acceptable 85-95 1-15		er % % %
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The waste con	DMPONENTS I assess of the fol Water Oil	ABLE	iais		Ranges are acceptable 85-95 1-15		er % % %

SECTION 5: SE	ifety Reia	ited Data					
if the handling	of this w	aste requires the	use of special prot	ective equipme	ent, please ex	çplain.	
standard PPE							
				300			**************************************
					×.)		
SECTION 6: A	tached S	upporting Docum	<u>nents</u>				
List all docume	ents, nate	is, data and/or an	alysis attached to	this form as par	rt of the was:	te	
approval packa	ege.	none					
						rotes	
	Production						No.
SECTION 7: In	comantii	iliriae					
		emasa Libilities (if any):					
oxidizers	manipa	emineral di imikti					
CHARGE C13					.1	· · · · · · · · · · · · · · · · · · ·	and the second s
7273462		- Th (-					The state of the s
***************************************	132			- Prysion Company			Marie Trailine
SECTION 8: G	enerator'	s Knowledge Doc	umentation				
Laboratory an	atysis of t	he hazardous wa:	ste characteristics,	listed below,W	AS NOT PER	FORMED	
based upon th	e follow	ng generator knot	wiedge:				
TCLP Metals:		NA					TWO.
TCLP Volatiles	:	NA.					The state of the s
TCLP Semi-Vo!	atiles:	NA				The second second second	
Reactivity:		NA		70.4			
Corresivity:		NA		7,000			
Ignstability:		NA					170176
-							
SECTION 9: Wa	ste Receir	ot Classification Un	der 40 CFR 437 (Prta	ining to Pre-Tre	atment Requi	rements fo	or Centralized Waste Treatment
Facilities)						₹ YES	□ NO
15			or wastewater sludgi	2:		7 123	1.1100
	F- 196	, complete this sed	.10311-				
p	LEASE CHI	ECK THE APPROPRI	ATE BOX. IF NO APP	ROPRIATE CATE	GORY, GO TO	THE NEXT	PAGE.
	_						
Metals Subcats		bport A roplating baths and	dies shudros				
		ropiding datis an ring rinse water an					
Γc	incomate s	wastes					
	ir pollutia	n control allow duv	vii water and sludge:	i.			
□ s	pent anoc	lizing solutions					
		n wastewaters					
- E	yaste aqu Yaste aqu	id mercury 	eater than 136 mg/s				
i L	Marta arid	a clique passes built a	r without menals				
□ 6	leaning, r	resing, and surface	preparation solution	is from electrop	lating or phos	រូវាមព្រង ១ន	ierations
()	ribratory o	leburring wastewa	ter				
	dkaline ar	id acid solutions us	ed to clean metal pa	rts or equipmen)E		
Oils Subcatego	ere: Subs	art B					
	Jagd oils						
□ (2)	lii-water -	emulsions or mixtu	685				
	ubricants.						
<u> </u>	Loolants		duan un fram astrol	arum karreere			
		ited groundwater (sleum products	dean-up from petrol	China andress			
	usea perr Dii spall ck						
i i i i i i i i i i i i i i i i i i i	alige wate	;					
	Sinse/was	h waters from peta	oleum sources				

Interceptor wastes Off-specification fuels Underground storage remediation waste Tank clean out from potroleum or oily sources Non-contact used glycols Aqueous and oil mixtures from parts cleaning operations Wasteweter from oil bearing paint washes
Organics Subcategory: Subpart C Candill leachate Contaminated groupdwater clean up from non-petroleom sources Solvent-bearing wastes Off-specification organic product Still bottoms Byproduct waste giyon Wastewater from paint wasnes Wastewater from paint wasnes Wastewater from organic chemical product operations Tank clean-out from organic non-petroleum sources
(1) If the waste contains all and grease at or in excess of 100 mg/L, the waste should be classified in the old subcutegory.
(2) If the waste contains oil and grease less than IDO mg/L, and his any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory. Cadmium: 0.2 mg/L Chromium: 8.9 mg/L Copper: 4.9 mg/L Mickei: 37.5 mg/L
(3) If the waste contains oil and grease loss than IDO mg/L, and does not have concentrations of calmium, chromason, couper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory. Meta's Subcategory One Subcategory Organics Subcategory
SECTION 10. Additional Instructions
If you cannot determine the correct subcategory in Section Band you did not furnish data for the concentration of Cadmium, Chromium, Coppur, Nickel, and Oll and Grease, CES will send office to a commercial laboratory a sample to determine these concentrations. This will be prior to accumtance. The generator will be responsible for the cost of the analysis.
SECTION 11: Generator's Certification The information contained herein is based on generator knowledge and/or analytical data. Thereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. Feelify that the materials tested are representative of all materials described by this document.
Authorized Signature: Date: 1/1/1028
Authorized Signature: Ollen Date: 11/17/2008 Printed Name/Title: Jauming Chen, Site Super intendent
CES USE ONLY (DO NOT WRITE IN THIS SPACE)
Compliance Officer: Date: 2-5-08 3103 Approved Rejected Approval number:



☐ Subcategory A

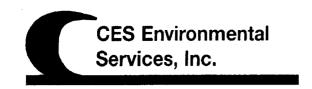
PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
\$0.12/gal + trans+fsc
2. Contamination Limit (maximum limit before surchages apply):
Sta
3. Surcharge Pricing:
Sta per rate sheeten shored drive
4. Special Testing Requirements:
Sts: TOC, pt, phenol, metals, 70011, 7050lids; emulsion yes or no - May need to go to heat tank to break emulsion.
5. Treatment and Handling Protocol:
Sub Cut B. water - Heat tank processing for emulsion oil removal.
6. Treated Wastewater Discharge Subcategory:

Subcategory B ☐ Subcategory C



7. Tests for Product	Recovered/Recy	cled (if applicat	ole):		
8. Management for	Product Recovered	ed/Recycled (if	applicable)		



Waste Pre-Acceptance/Approval Letter

Date 12/5/2008

Dear Jauming

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3104

Expiration Date 12/5/2010

Generator: Afton Chemical Corporation - Port Arthur

Address: 4241 Savannah Ave

Port Arthur, TX 77640

Waste Information

Name of Waste: Oily Absorbent TCEQ Waste Code #: CESQ3011

Container Type:

Detailed Description of Process Generating Waste:

Oily Absorbent pads, rags, Filters, & debris from oil additives plant

Color: Brown Odor: Hydrocarbon

Odor: Hydrocarbon pH: 3-11

Physical State:

Incompatibilities: oxidizers

Safety Related Data/Special Handling:

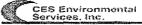
Standard PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.





4904 Griggs Road, Hauston, TX 77021
Phoses (713) 676-1460 Fax: (713) 676-1676
http://www.cesengroomental.com
TCEQ industrial Solid Waste Permit Number: 3:348



SECTION 1:	Genera	tor in	<u>formati</u>	00													
Company:	Afton C	hens	sas Corp	oration	ì												
Address:	4245 Sa	vann	ian Ave							· · · · · · · · · · · · · · · · · · ·				NT		*****	
City:	Port An	hur					State:		īΧ		Zip:	776	40-3668			···	
Contact:	Jauming	; Che	n			2.00	-	,	Title:		Operation	ans Sup	erintend	ent		هطامة بريازة الاست	
Phone Numi	ber:	Apr. 1004 1 1 24	409-989	9-0602					Fax Nur	nber:		- Constitution Consti			and the second second		
24/hr Phone	: Numbe	er:	832-444	4-2043	. 440-24			*****					CONTROL OF SPECIAL CONTROL OF SP		manusing , spe	-	
US EPA ID N	a:		TXROCO														
State ID No:			CESQG			***************************************			SIC Cod	e:	The second second						
				and the state of t			The same of the same										
SECTION 2:	Billing to	riorn	nation -	2	Sam	e as A	Above										
Company:																	
Address:	,		THE PERSON NAMED IN COLUMN				THE PARTY OF THE P				10000						
City:			Part of the Part o				State:				Zip:		**************************************			· and color	
Contact:		tra Periodo				711	-	"	Title:		•	ACT COLUMN			manufacture and and		
Phone Numi	ber:	-7 -1 damed a			· · · · · · · · · · · · · · · · · · ·				Fax Nur	nber:		BSS-coleman			1980-1		
					- Charles - China			2,000						THE RESERVE			- Commence of the
SECTION 3:	General	Desc	ription	of the	Waste												
Name of Wa	ste:		Ony Abs	sorbeni	ŧ												
Detailed De	scription	of P	rocess (Senera	ting W	aste	PROGRAMA P. P. Come Berger Street		Oily abs	orben	t Pads, Ra	ogs, filti	ers, & deb	ris fr	om.		
oil additives	nlant				_				(Vde.Aut.			The Control of the Co					
	·		EAST Dis in a completion of							Married Andrews						-	Philippines and the
The Text of the Control of the Contr								- Partie	***************************************			A.C. Springer					
Physical Stat	te:		Liquid			11	Sludge	!			Powder						
		7	Solid			ī	Filter C	ake		Π	Combin	ation					
										_							
Calor:	brown								Odor:		hydroca	rbon					
	***************************************						•										
Specific Gra	vity (wa	ter=1	l):	-	NA _						Density:	NA.		os/ga	1		
Does this m	aterial c	ontai	in any to	otal ph	enolic	çomp	ounds?			Yes	. [≥ No					
Does this m	aterial c	ontai	in any p	ara sut	stitut	ed ph	enolic c	omp	ounds?			Yes	Œ∧	lo			
is the Waste	subject	to t	he benz	ene wa	iste op	eratio	on NESI	IAP?	[40 CFF	Part (61, Subpa	art FF)			Y85		No
Answer "Yes	" if your	W85	te conta	ំពន់ ២៩៤	izene A	ND 🖟	the SIC	code	e from y	our fa	cility is a	ne of th	e followi	ng:			
2812		2813		2816		1819		821		2822		23	2824		2833		2334
2835		2836		7841		2842	. 2	843		2844	28	51	2861		2865		2869
2873		2874		2876		2879	2	891		2892	28	93	2896		2899		2911
3312		4953		4959		9511											
Layers:	区	Sing	le-phase	e		Multi	i-phase										
		~															
Container T	ype:	\Box	Drum	7	Tote		Truck		Other (explai	n)						
				******			-										
Frequency:	□ We	ekly	Mc Mc	onthly	Y	early	[Or	ne-Til	me								
Quantity:				r		1											
							*										

	complete, sign and date the U	51.3? Inderlying Haz	☐ Ye: ardous Constitue			
If "Yes", Is it:	(DOO1 (Ignitable)	0002 (Co	rrosive)] D003 (Reactive)		
Characteristic for Tox		-		5 ∏5007 <u>∏</u> 5008		
	[]00					
Characteristic for Tox	tic Organies: D012 thru D04	3(piease list.	all that apply)	7 00 L		
	isted waste or mixed with e e list ALL applicable codes:		☐ Yes	i 💟 No		***************************************
40 CFR 261.33(e) or (f	oroduct or spill cleanup that }?		No No	aste cade under		
Texas State Wasta Co	de Number:	CESQ-301	1	The same of the sa		
Proper US DOT Shippi	ing Name: Non RCR	A/Non DOT R	tegulated Waste	•		
Class: NA	UN/NA: NA	PG:	NA	RQ: NA		er, gold
Flash Point	рН	Reac	tive Sulfides	Sal	ids	
>140	3-11	NA	m8/1	NA mg/l	10G	%
Oil & Grease >1500 mg/	NA mg/l	NA.	Zinc rog/i	Capper NA mg/l	NA NA	kel mg/l
SECTION 4: Physical a	and Chaminal Duty					
	OMPONENTS TARLE	-	T	CONCENTRATOIN		
The waste co	onsists of the following mate	eria:s		LIMITS		
P.	ads, Rags, Absorbent			Ranges are acceptable		UNITS or %
	and Hasa, what them			Ranges are acceptable 90-95		
	Debris		The state of the s	·		Or %
AN CORE		500 L		90-95		or %
er care	Debris		1000000	90-95 0-5		or % % %
10 () () () () () () () () () (Debris		100000	90-95 0-5		or % % %
N (164)	Debris		1700000	90-95 0-5		or % % %
	Debris	200 C. A. C.		90-95 0-5		or % % %
	Debris			90-95 0-5		or % % %
	Debris	20054		90-95 0-5		or % % %
	Debris			90-95 0-5		or % % %
	Debris			90-95 0-5		or % % %
	Debris			90-95 0-5		or % % %
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	Debris			90-95 0-5		or % % %
	Debris			90-95 0-5		or % % %
	Debris			90-95 0-5		or % % %
	Debris			90-95 0-5		or % % %

SECTION 5: Safety Ro	<u>flated Data</u>
If the handling of this	waste requires the use of special protective equipment, please explain.
standard PPE	

SECTION 6: Attached	Supporting Documents
List all documents, no	tes, data and/or analysis attached to this form as part of the waste
approval package.	none
,	100 marsh 1 ma
SECTION 7: Incompat	ibilities
Please list ALL incomp	atibilities (if any):
oxidizers	
SECTION 8: Generato	r's Knowledge Documentation
Laboratory analysis of	the nazardous waste characteristics, listed below, WAS NOT PERFORMED
based upon the follow	ring generator knowledge:
TCLP Metals:	NA
FCLP Volatiles:	NA AV
TCLP Semi-Volatiles:	NA
Reactivity:	MA.
Corrosivity:	NA .
Ignitability:	NA .
SECTION 9: Waste Rece	ipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment
Facilities)	
	erial a wastewater or wastewater sludge? Type VES VENO
It A62	complete this section
PI FASE CE	HECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.
,	
Metals Subcategory: S	
	tropiating baths and/or sludges
	shing onse water and sludges
Chromate	wastes on control blow down water and sludges
	dising salutions
distance.	on wastewaters
🔲 Waste liqu	rid mercury
	antaining wastes greater than 136 mg/
	ds and bases with or without metals
	rissing, and surface preparation solutions from electroplating or phosphateng operations deburring wastewater
	ecourring matemater no acid solutions used to clean metal parts or equipment
(m-1 modeling 20	An maria a marianta antico del circa de como maria de como de
Oils Subcategory: Subj	art B
Used oils	
	emulsions or mixtures
Lubricant)
Coolants	utoví voja veriumbra elaborum fram notroloura saucesa
	ated groundwater clean-up from actralcum sources aseum products
☐ Oil spill d	
Bilge wate	
med	

	Interceptor wasses
1	Off-specification fuels
<u></u>	Underground storage remediation waste
F	Tank clean out from petroleum or only sources Non-contact used glycols
F	Agueous and oil mixtures from parts cleaning operations
F	Wastewoter from oil bearing point washes
+	
Organics Su	ibcotegory: Subpart C
<u>.</u>	Landfill leachate
-	Contaminated groundwater clean-up from nun-petroleum sources Solvent-bearing wastes
i-	
F	Still bottoms
Ī	Byproduct waste giyopi
Ľ	Wastewater from paint washes
	Wastewater from adhesives and/or epoxies formulation
200	Wastewater from organic chemical product operations
C _{en}	_i Tank dean-out from organic, non-petroleum sources
(4)	
	If the waste contains oil and grease at or in excess of E0 mg/L, the waste should be classified in the oils subcategory
	• • • • • • • • • • • • • • • • • • •
(2)	
	If the waste contains oil and grease less than 120 mg/L, and has any of the pollutants listed below in concentrations in
	excess of the values listed below, the waste should be classified in the metals subcategory.
	Cadmium: 0.2 mg/L
	Chromium: 89 mg/L
	Copper: 4.9 mg/L
	Nickel: 37.5 mg/L
(3)	If the waste contains oil and grease less than 130 mg/L, and does not have concentrations of cadmium, chromium, copper.
	or nickel above any of the values listed above, the waste should be classified in the arganics subcatugory.
	Metals Subcategory
	Oils Subcategory
	C Organics Subcategory
	T cuttource anneatestat.
CCATION AN	Additional Instructions
SECTION TO	ADDITION STITUTED
if you canno	ot determine the correct subcategory in Section Sand you did not furnish data for the concentration of Cadmium, Chromium,
Copper, Nic	kef, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This
will be prior	to acceptance. The generator will be responsible for the cost of the analysis
	1: Generator's Certification
	iation contained herein is based on 💎 generator knowledge and/or 🔲 analytical data.
	rtify that the above and attached description is complete and accurate to the best of
my knowle	idge and ability to determine that no deliberate or willful umissions of compostion
properties	exist and that all known or suspected hazards have been disclosed. I certify that the
materials t	ested are representative of all materials described by this document.
	0 21 11/2/200
Authorized	Signature:Date:
	= 0 0 0 $+ 0$ $+$
Printed Na	asignature: Dele Date: 11/17/2008 Ime/Title: Tauning Chen Site Superintendent
CES USE O	NLY (DO NOT WRITE IN THIS SPACE)
	() 1 d () A
Compliand	
Date: \	2-5-08 Approved Rejected
Approvaí N	lumber: 310 H
1	į.



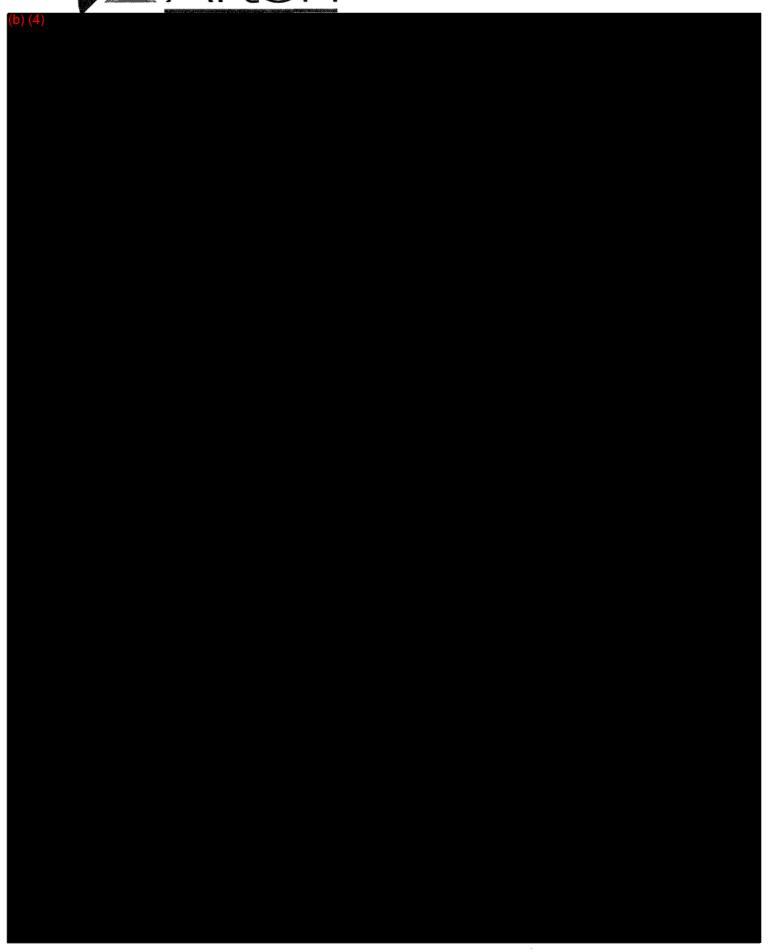
1. Base Pricing (including freight):
\$175/tote +trans+fsc
2. Contamination Limit (maximum limit before surchages apply):
3. Surcharge Pricing:
4. Special Testing Requirements:
5. Treatment and Handling Protocol:
Class 1 Bulk.
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C

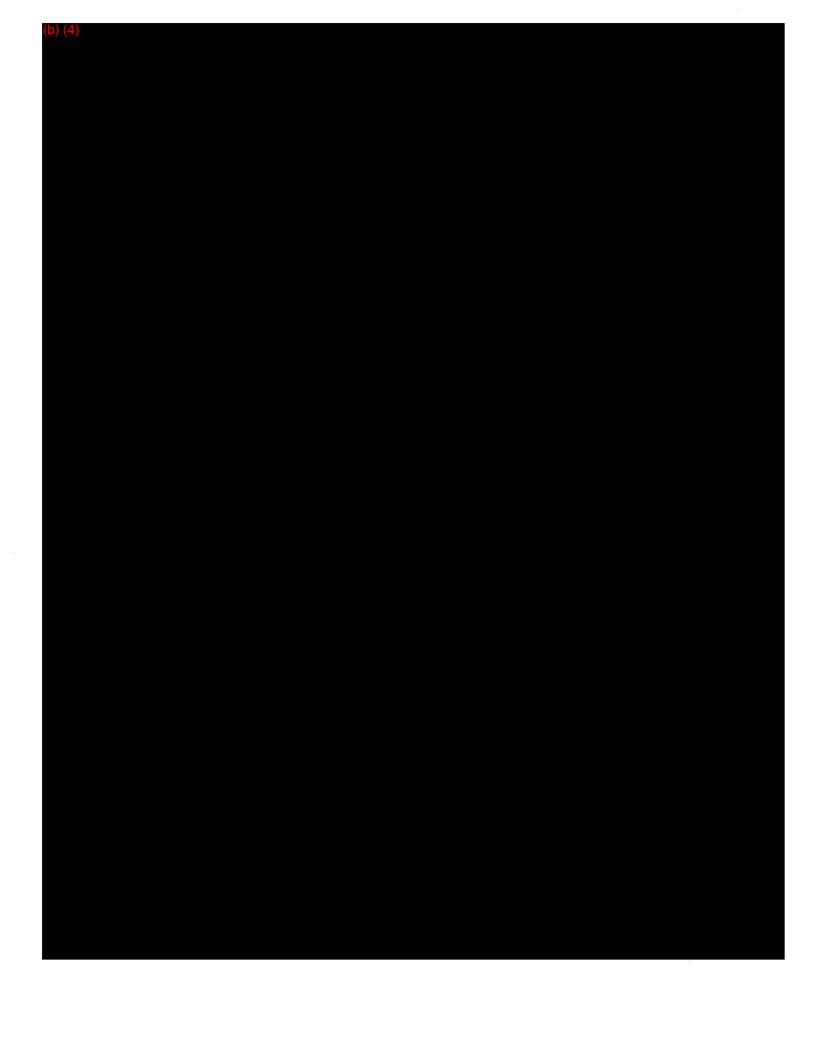


7. Tests for Product Recovered/Recycled (if applicable):	
8. Management for Product Recovered/Recycled (if applicable)	

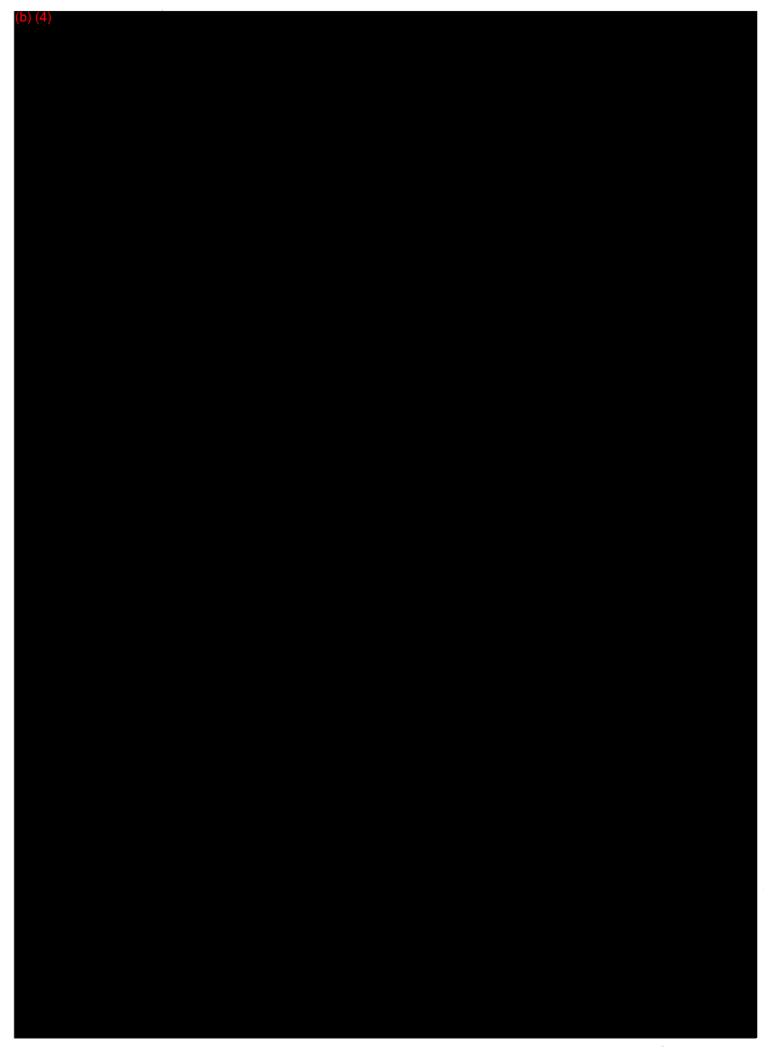


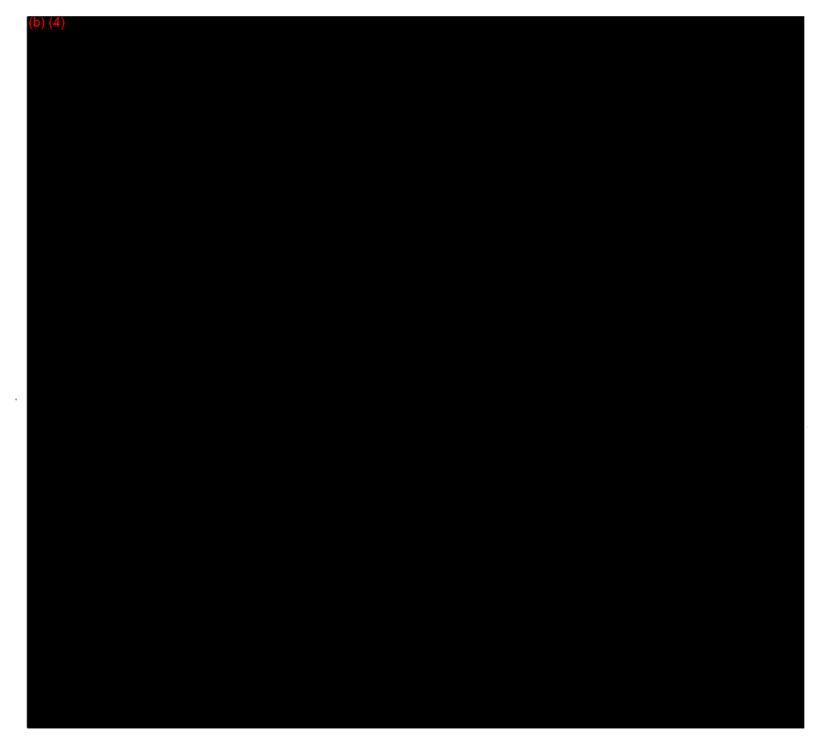
Material Safety Data Sheet



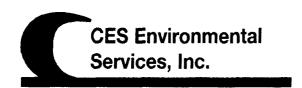








*** END OF MSDS ***



4904 Griggs Road Houston TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1460

Waste Pre-Acceptance/Approval Letter

Date 5/28/2009

Dear Jauming Chen

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3353

Expiration Date 5/28/2010

Generator: Afton Chemical Corporation - Port Arthur

Address: 4245 Savannah Ave

Port Arthur, TX 77640

Waste Information

Name of Waste: Class I Solids TCEQ Waste Code #: 10106091

Container Type: vacuum box

Detailed Description of Process Generating Waste:

solids from cleaning a product tank - lauryl methacrylate product tank (polymerized solid

Color: clear

Odor: none

pH: 3-11

Physical State:

Incompatibilities: excessive heat, strong oxidizers

Safety Related Data/Special Handling:

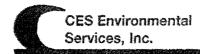
std PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.



58/MM

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900 15

SECTION 1: Gener	ator information							
Company:	Afton Chemical Corpora	tion - Port Arthur						
Address:	4245 Savannah Ave 42	45 Savannah Ave	man 19 - Marie - Marie and Antonio Marie and Antonio Antonio Antonio Antonio Antonio Antonio Antonio Antonio A	Personal page of the Mercula college and Ambridge and Amb	to observable interference and all the second and an experimental	Commence of the Commence of th	Consultation and the Consultation of the Consu	Company of advantage of the company
City, State, Zip:	Port Arthur TX 77640	The state of the s	menglifico (° 16 - 14 - 14) on and a consumer an easy mystic and meng a coloition	f an outgoing and the contract of	Transis (m. 14. 10. compagning the making angus Affrond in Physics and analysis	majorate construction over 1981 1981 1981	, yes yet and have a resemble to the resemble of the	F I CONTROL OF CONTROL
Contact:	Jauming Chen		7	îtle :	The state of the s		- PT - AND LEFT - THE APPRICA LEFT	the principal state of the stat
Phone No:	(409) 989-0602		F	ax:	(409) 989-0603			
24 / HR Phone:	washing to the second of the s							
U.S EPA I.D No :	The state of the s							
State I.D :			S	IC Code				
SECTION 2: Billing	Information	Madesian as according to the state of						
Company:	Afton Chemical Corpora	tion - Port Arthur		PACA ANAMAN ANAMAN				-throughout privation with the PT 1984 II
Address:	4245 Savannah Ave 42	45 Savannah Ave					water or the state of the state of	
City, State, Zip:	Port Arthur TX 77640	and the same of th			The state of the s		was decided agreement of the contractions and	- and the standard of the stan
Contact:	Jauming Chen	maan araa gaarin amaaran iyo in 190 ya - 1 dhii dhii dhii dhii dhii dhaadaa a ya hada ayahada ba		itle :		and the same of the same of the	da on the Arthur contribution the	novinia la 188 4 de primamina da la 1 ⁸⁸⁸ de ria
Phone No:	(409) 989-0602		F	ax:	(409) 989-0603			•
SECTION 3: Gener	al Description of the Waste							
Name of Waste:	Class 1 solids							Volumenta and American
Detailed Descrip	tion of the Process Gen	erating Waste:						
Solids from Elea	ning a product	tank - laur	ylmethacr.	ylate p	reduct ta	. nk (polym	erized solido)
Physical State :	ب ر ☑ Liquid	√ Sludge	Powe				,	
rilysical state.	✓ Solid	Filter Cake	∰ Coml					
		•	<u></u>					
Color:	and hidde for supplied by the Discourance perfect the beauty of	clear	Odor:		n	one	Control Control of State Control of Stat	a vid al light ligh committee his high ma video.
Specific Gravity	(Water=1):	na	Density:		na	1	lbs	s / gal
Does this material	contain any total phenolic	compounds?	Yes	✓ No				
	contain any para substitut			Yes	⊘ No			
Is the Waste subje	ct to the benzene waste op	eration NESHAP? (4	0 CFR Part 61. Su	ubpart FF)	Yes	\mathbf{Z}	No	
-	2816 2819 2821 283	•		2835 28				2851
	2869 2873 2874 28			2 8 96 28				9511
Layers:	✓ Single-Phas	Multi-Phase	8					
Container Type :	Drum 🔠	Tote 🔞	Truck 📝 C	Other (exp	olain) <u>Vac</u>	uum	box	mercellum (merce)
Container Size :	25 yds							
Number Of Units	1							
Is this a USEPA "	Hazardous Waste" per 40	CFR 261.3?	☐ Yes	 ✓ No				
If "Yes", then p	lease complete, sign and dat	e the Underlying Haza	rdous Constituents	Form atta	ched hereto			

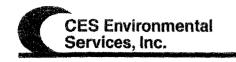
Characteristic for Toxic	Metals:	D004	D005	D006		0007			
		D008	□ D009	D010		0011			
Characteristics for Toxic	: Organics: D	012 thru	D043 (plea	se list all that	apply)	The consolidation about the consolidation and the consolidation about the consolidation and the consolidation	A A STATE OF THE S	CONTRACTOR OF THE STATE OF THE	
Is this an "F" or "K" List	ed waste or r	nixed wit	th one?	☐ Yes	✓ No				
If "Yes", then please	list ALL appl	icable co	des:	PS - P S - al remangaigh de calmas (Middelhous	n Annexe de de de constante de	 — yes freelessee finitesia; y — i — yes free manakasi yekendi. 	N. OF THE CONTRACT OF THE CONT	magenesses of the contract of the property of	Production of the Production o
Is this a commercial pro 261.33(e) or (f)?	duct or spill (cleanup t	hat would d	carry a "U" or	"P" wast	e code under 40	CFR Y	res 🗹 N	0
If "Yes", then please	list ALL appi	licable co	des:		and the second second section is	The state of the s			dependency of the second secon
Texas State Waste Code	e No :	101	0 60	91					
Proper U.S. State Waste	Code No :	maga a Makana yang pilikulan maga at	· A constant promote the property of the colors	Non-RO	RA/Non	-DOT Regulated	Classi	solids	
Class: na	UN	VNA:	na		PG:	na		RQ:	na
Flash Point		рН	R	eactive Sulfic	des	Reactive Cyan	ides	Solids	PECINING WATERWAY STATE
>150	1400 pt 100 pt 100	3-11	į	na	mg/l	na	mg/l	95	%
Oil and Grease		гос		Zinc		Copper		Nickel	Mary State of the
O mg/	1	na	mg/l	na	mg/l	na	mg/l	na	mg/
And the state of t									the state of the state of
SECTION 4: Physical and C									enmounty.
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The material	product co	water	BIG IOHOW	ing materials		Nanyes	o S	~(1)	%
	S		cryl met	merylate p	olymer	~)	9045	o ar	%
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									1
		NATIONAL PROPERTY IN THE				tion agraph a battage Ways agraph on the graph of the graph of the first of the graph of the gra	***************************************		
SECTION 5: Safety Related	l Data								
If the handling of this w	aste require	s the use	e of specia	l protective e	quipme	nt, please explai	n.		
std ppe									
SECTION 6: Attached Supp			magazine ja						
List all documents, note	es, data, and	l/or analy	sis attache	ed to this for	n as par	t of the waste as	proval pac	kage.	
MSDS									
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1								
SECTION 7: Incompatibiliti Please list all incompati	desperations of places in the annual particle country and a title and other in-		To any see to po						
excessive heat, 5			r 5						
3,100,51,000,73	" ongo."								
SECTION 8: Generator's K	nowledge Do	cumentati	on						
Laboratory analysis of t	he hazardou		a popularita	stics, listed b	elow, W	AS NOT PERFO	RMED base	ed upon the	
TCLP Metals :	X X								
TCLP Volatilies :	^ ×								
TCLP Semi-Volatiles :	×								
Reactivity:	×								
· FACTORIS ASSET S	P			7					

Corros	sivity:
Ignital	pility:
SECTION	ON 9: Waste Receipt Classification Under 40 CFR 437
THE RESERVED	
If YES	s', complete this section
PLEAS	SE CHECK THE APPROPRIATE BOX: IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE
Matals	s Subcategory: Subpart A
	Spent electroplating baths and/or sludges
	Metal finishing rinse water and sludges
	Chromate wastes
	Air pollution control blow down water and sludges
	Spent anodizing solutions
	Incineration wastewaters
	Waste liquid mercury
	Cyanide-containing wastes greater than 136 mg/l
	Waste acids and bases with or without metals
	Cleaning, rinsing, and surface preparation solutions from electroplating or phosph
	Vibratory deburring wastewater
	Alkaline and acid solutions used to clean metal parts or equipment
Oils S	ubcategory: Subpart B
	Used oils
	Oil-water emulsions or mixtures
	Lubricants
	Coolants
	Contaminated groundwater clean-up from petroleum sources
	Used petroleum products
	Oil spill clean-up
	Bilge water
	Rinse/wash waters from petroleum sources
	Interceptor wastes
	Off-specification fuels
	Underground storage remediation wastes
	Tank clean-out from petroleum or oily sources
	Non-contact used glycols
	Aqueous and oil mixtures from parts cleaning operations
	Wastewater from oil bearing paint washes
_	
Organ	ics Subcategory Subpart C Landfill leachate
	Contaminated groundwater clean-up from non-petroleum sources
	Solvent-bering wastes
	·
	Off-specification organic product Still bottoms
	Byproduct waste glycol Wastewater from point washes
	Wastewater from paint washes
닏	Wastewater from adhesive and/or epoxies formulation
	Wastewater from organic chemical product operations

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory
(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory
Cadmium: 0.2 mg/L Chromium: 8.9 mg/L Copper: 4.9 mg/L Nickel: 37.5 mg/L
(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.
☐ Metals Subcatego
☐ Oils Subcatego
☐ Organics Subcategory
SECTION 10: Additional Instruction
If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.
000000000000000000000000000000000000000
SECTION 11: Generator's Certification
The information contained herein is based on  generator knowledge and/or  analytical data. I hereby cerity that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.
The information contained herein is based on degree generator knowledge and/or analytical data. I hereby cerity that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.
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The information contained herein is based on generator knowledge and/or analytical data. I hereby cerity that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.  Authorized Signature:  Date:  Date:  Printed Name / Title:  Jauming Chen, Site Super intendent



1. Dase Pricing (including freight):
#50/yard + trans + foc
,
2. Contamination Limit (maximum limit before surchages apply):
Must meet Uans 2 Specs
3. Surcharge Pricing:
4. Special Testing Requirements:  fp. (must be > 140 deg F)
5. Treatment and Handling Protocol:
Send to HPP - Claro 2 Solids
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



7. Tests for Product Recovered/Recycled (if applicable):	
8. Management for Product Recovered/Recycled (if applicable)	

## **Material Safety Data Sheet**

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#### 1. Chemical Product and Company Identification

LMA - UDM

Synonyms: lauryl methacrylate

Supplier:

Evonik RohMax USA, Inc. 723 Electronic Drive Horsham, PA 19044-2228 USA

**Evonik RohMax Additives GmbH** Kirschenallee 64293 Darmstadt Germany

Telephone No.

215-706-0843

Phone

+49 6151 18 09

Toll Free No.

1-888-876-4629 Regulatory Specialist 215-706-5840

Spill, Leak, Fire, Exposure or Accident

CHEMTREC®

1-800-424-9300

Emergency

+49 6151 18 4342

Outside USA

703-527-3887 (Collect calls accepted)

+33 3 88 73 60 00 (France)

CANUTEC

613-996-6666 (Canada)

Product Use: component for lubricant additives

#### 2. Composition/Information on Ingredients

This material is classified as hazardous under OSHA regulations.

Ingredients CAS Reg. No. Weight % dodecyl methacrylate 142-90-5 60 - 100 tetradecyl methacrylate 2549-53-3 15 - 40

See Section 8, Exposure Controls/Personal Protection

#### 3. Hazards Identification

#### **Emergency Overview**

Color:

pale yellow

Appearance:

liquid

Odor:

sweet, ester-like

MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION

#### **Primary Routes of Exposure**

Eye contact Skin contact Inhalation

### **Material Safety Data Sheet**

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#### **Potential Health Effects**

#### Inhalation

Inhalation of vapor or mist can cause the following:

- irritation of nose and throat

#### Eye contact

Material can cause the following:

- irritation

#### Skin contact

Material can cause the following:

- irritation

#### Ingestion

No hazard expected in normal use.

#### **Potential Environmental Effects**

See SECTION 12, Ecological Information

#### 4. First Aid Measures

#### **First Aid Procedures**

#### General information

Remove soiled, soaked clothing immediately. Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours.

#### Inhalation

Remove to fresh air. If breathing is difficult, get medical attention.

#### Eye contact

In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.

#### Skin contact

Immediately wash skin with soap and plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Obtain medical attention if irritation develops or persists.

#### Ingestion

Get immediate medical attention. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

#### 5. Fire-Fighting Measures

Flash point

> 150 °C ( ASTM D 3278 )

> 302 °F (ASTM D 3278)

Auto ignition

277 °C 531 °F

Lower explosion limit

not available

Upper explosion limit

not available

**OSHA Flammability Classification** 

none

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#### Other Flammable Properties

EVACUATE THE AREA of all non-emergency personnel. Fight advanced fires from a protected location. Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Avoid breathing smoke. Remain upwind.

#### **Extinguishing Media**

Use the following extinguishing media when fighting fires involving this material:

foam - dry chemical - carbon dioxide

#### Fire Fighting Procedures

Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent). Wear full protective gear.

#### 6. Accidental Release Measures

#### **Personal Protection**

If exposed to material during clean-up operations, see SECTION 4, 'First Aid Measures', for actions to follow. Appropriate protective equipment must be worn when handling a spill of this material.

For further Information see SECTION 8, Exposure Controls/Personal Protection.

#### **Procedures**

Keep spectators away. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Contaminated monomer may be unstable. Add inhibitor to prevent polymerization.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. NOTE: Spills on porous surfaces can contaminate groundwater.

#### 7. Handling and Storage

#### Handling

Do not handle material near food, feed or drinking water. See SECTION 8, 'Exposure Controls/Personal Protection', prior to handling. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Wash after handling and shower at end of work period.

#### Storage

Keep in temperature range between a minimum of 1 °C / 34 °F up to a maximum of 80 °C / 176 °F. Avoid temperature extremes during storage; ambient temperature preferred. This product contains inhibitor to stabilize it during shipment and storage. The effectiveness of the inhibitor is dependent on the presence of dissolved oxygen. In order to maintain sufficient dissolved oxygen in the liquid to avoid polymerisation, the monomer must always be stored with a vapor space oxygen concentration of 5% to 21% (air). If the material is stored longer than six month in a closed container, replenish the vapor space with fresh air to avoid depletion of the dissolved oxygen. Use monomer within 1 year. Store material in containers made of the following: - aluminium - stainless steel. Material will freeze below freezing temperature which can lead to partitioning of inhibitor when thawed. Repeated freeze-thaw cycles should be avoided.

#### Other

CONTAINERS HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue (vapors and/or liquid) follow all MSDS and label warnings even after container is emptied. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations. Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities. Avoid inhalation of smoke if incinerated.

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#### 8. Exposure Controls/Personal Protection

#### **Engineering Controls (Ventilation)**

Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evolution. Refer to the current edition of 'Industrial Ventilation: A Manual of Recommended Practice' published by the American Conference of Government Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

#### Personal Protective Equipment (PPE)

#### Respiratory protection

Where misting may occur, wear a MSHA/NIOSH approved (or equivalent) half mask, dust/mist air purifying respirator.

#### **Eye Protection**

Use safety glasses (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

#### **Skin Protection**

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

#### **Hand Protection**

The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection:

butyl rubber gloves

Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use.

Wash hands with soap and water.

#### Other Protective Equipment

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### 9. Physical and Chemical Properties

Appearance pale yellow

Physical state liquid

Odor sweet, ester-like

Flash point > 150 °C ( ASTM D 3278 )

> 302 °F (ASTM D 3278)

pH-value not applicable
Viscosity (kinematic) not available

Specific gravity (water = 1) 0.868 g/cm3

Vapor density (air = 1) > 1

Vapor pressure 9.33 hPa (= mbar) at 160 °C / 320 °F

Melting Point -22 °C / -8 °F

Boiling Range 272 - 344 °C / 522 - 651 °F at 1,013 hPa (= mbar)

Solubility in water virtually insoluble

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n-Octanol/water partition

coefficient

log Pow 6.88 (own calculation according to Rekker) (dodecyl

methacrylate)

log Pow 8.74 (own calculation according to Rekker)

(pentadecyl methacrylate)

**Evaporation rate** 

not available

**Odor threshold** 

not available

**Further information** 

none

See Section 5, Fire Fighting Measures

#### 10. Stability and Reactivity

#### Stability

No decomposition when used as directed.

#### **Conditions To Avoid**

This material is considered stable under specified conditions of storage, shipment and/or use. See SECTION 7, 'Handling and Storage', for specified conditions. This material can undergo polymerization. See 'Hazardous Polymerization' for conditions to avoid.

#### Incompatibility With Other Materials

Avoid contact with strong oxidizing and/or reducing agents, Avoid contact with free radical initiators.

#### **Hazardous Decomposition Products**

None when used as directed.

#### **Hazardous Polymerization**

Excessive aging, heat, contamination with polymerization catalysts, oxygen-free atmosphere, inhibitor depletion or ultraviolet light (sunlight) may cause polymerization. This material is not expected to undergo hazardous polymerization; energy will not be released rapidly.

#### 11. Toxicological Information

#### **Acute Oral Toxicity**

LD50 rat (analogy)

> 5,000 mg/kg

#### **Acute Dermal Toxicity**

LD50 rabbit (analogy)

> 3,000 mg/kg

#### Irritant Effect on the Skin

rabbit (analogy)

slightly irritating

#### Irritant Effect on the Eyes

rabbit (analogy)

slightly irritating

#### **Toxicity on Repeated Administration**

rat, inhalation, 28, tested in a saturated atmosphere Findings: no toxic effects (analogy)

#### Mutagenicity

not mutagenic in in vivo and in vitro tests

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(analogy)

#### Further Information on Toxicology

Avoid contact with the skin and eyes and inhalation of the product vapours.

#### 12. Ecological Information

#### Information on elimination (persistence and degradability)

#### Biodegradability

biodegradable (analogy)

#### **Ecotoxicological effect**

#### **Fish Toxicity**

LC50 gold fish (carassius auratus), 72 h

> 10,000 mg/l

(analogy)

LC50 Leuciscus idus, OECD 203, 48 h

> 1,000 mg/l

(analogy)

#### **Bacteria Toxicity**

EC50 active sludge, respiration inhibition test

> 300 mg/l

(analogy)

#### **Further Information on Ecology**

Do not allow to enter soil, waterways or waste water

#### 13. Disposal Considerations

#### **Procedures**

П

After the addition of excess inhibitor, incinerate liquid and contaminated diking material in accordance with local, state, and federal regulations. The above recommendation covers disposal of material as supplied.

#### 14. Transport Information

#### **Further information**

Not subject to the regulations on dangerous goods.

#### 15. Regulatory Information

#### INVENTORY INFORMATION

EINECS (EU)	listed or exempted
TSCA (USA)	listed or exempted
DSL (CDN)	listed or exempted
AICS (AUS)	listed or exempted
METI (J)	listed or exempted
ECL (KOR)	listed or exempted
PICCS (RP)	listed or exempted
IECS (VR)	listed or exempted

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119	<b>FEDERAL</b>	REGIII	ATORY	INFORM	<b>ATION</b>
$\mathbf{u}$	FEDERAL	nEGUL	AIUDI	HALCHIA	MILLIAN

Component / CASRN

TPQ [lbs] CERCL

CERCLA RQ [lbs] SARA 302 (40CFR302.4) List of EHS SARA 313 (40CFR372)

TSCA 12b

NONE

#### **COMPONENT CLASSIFICATION UNDER CLEAN AIR ACT SECTION 112**

Component / CASRN

Weight %

HAP

**EHAP** 

NONE

#### PRODUCT CLASSIFICATION UNDER SECTION 311/312 OF SARA (40CFR370)

NONE

#### US STATE REGULATORY INFORMATION

Component / CASRN	New Jersey RTK	Pennsylvania RTK	Massachusetts RTK	California Proposition 65 Cancer	California Proposition 65 Reproductive
dodecyl methacrylate / 142-90-5	NO	NO	NO	NO	NO
tetradecyl methacrylate / 2549-53-3	NO	NO	NO	NO	NO

#### **CANADIAN REGULATION**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation and the MSDS contains all information required by the Controlled Products Regulations.

This is a non-controlled product.

WHMIS: NO

Component / CASRN

NPRI

NONE

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#### 16. Other Information

	Health	Flammability	Reactivity	
HMIS-Ratings	1	1	1	
NFPA-Ratings	1	1	1	
	HMIS Hazard Ratings	NFPA Hazard Ratings		
4 = severe 3 = serious 2 = moderate 1 = slight 0 = minimal * = chronic health hazard		4 = extreme 3 = high 2 = moderate 1 = slight 0 = insignifica N = no NFPA		

The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.

This MSDS was prepared in accordance with ANSI Z400.1-1998.

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Date of printing: 10/22/2008

HOH OIL L.R. GANTER IDEAL CENTS

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P.O. Required: Y N 4% City of Houston Fee: Y N	Fuel Surcharge: 4-hr Minimum:		□ N □ N
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Recycle-CFS BOL 87632 0/w TOC 35040 Phonel 20 190000	npleine	19.21	1200.00
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			1.33
		(170.	
Washout			175.00
	15hes		871.95
13,590 FSCS POULD - CO BOL 884 (1) - to C 33820 50	~ 5000	10500	125000
18/11) - 900 8 14(1) 1000 131	25/10		787,25
13.5% 50			10615
Quelle Ces COL 88721- MUSSIGNE			1250,00
7/180) 42505	50 Mb		107.50
13.595FSC Recurrences 506 88750-106871896.	5000 Emily	600	07502
1ºb energes see	ego	2250	29003250
1% conplished bel	57.27	f008+	59.29 60.875
	54.0	0221	
	S I Finester	ULLIT	I INHIT IC

## CES Environmental Services, Inc. Profit & Loss Sheet

CONFIDENTIAL

CONFIDENTIAL

Billing/AP Information		Salesperson:	Jav	BAKEr	
Name: H And H Oil L.P.	Assigned:	» <b>/</b>	9238 S.T. T. PAN 43 S. S. S. S. S.	gned:	
Contact: Kelvin Heine					
Address: 2909 FM 685	Folder 1.D.#	H And	H Oil L.	P. (FANTEF ideal Lease) ev	
Pfleugerville, Tx	78660		oil	y WATE	<u> </u>
		Job Contact:	DAVe	o zu do T	N
Phone: 800-777-1498		44-94 1			~355-8904
Fax:		4.0	Fax:	310	- 477-2520
P.O Required: Y: City of Houston: Y:	N: ¥ × N: ×	E 12 A STATE OF THE STATE OF TH	urcharge: Minimum:	Y: Y:	¥ N.
Base Oils Black Oils Light Ends			70% oil)	Emulsion O	ils (50%-70% oil)
Item	Job Vendor		CES	S Cost	Customer Charge
Trans	CES				\$85/hr
FSC	CES			-	Corrent
FSC Recycle Oily Water	CES				
				·	
				-	
			<u> </u>		
					·
				`	
				-	
	Alemana .				
Cu	stome <mark>r Special</mark>	Request/Requir	ement .		
				<del></del>	

CONFIDENTIAL

## CES Environmental Services, Inc.

Invoice

Date	Invoice #
7/21/2009	57786

4904 Griggs Road Houston, TX 77021

Phone: (713) 676-1460 Fax: (713) 676-1676

Bill To:

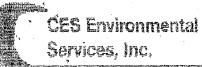
H&H Oil LP

20909 FM 685

Pflugerville, Texas 78660 Attn: Crystal Reininger

		P.O. No.	Terms	Pr	oject
			Net 30		
Quantity	Description		Manifest #	Rate	Amount
	07/01/09				
10.25	Transportation services by CES @ \$85.00	per hour		85.00	871.25
5 000	13.5% Fuel Surcharge		DOI 99444	117.62	117.62
5,000	Recycling of Non RCRA / Non DOT regul \$0.21 per gallon (TOC 33820 & 25ppm)	ated only water w	BOL 88444	0.21	1,050.00
	07/09/09				
0.25	Transportation services by CES @ \$85.00	ner hour		85.00	786.25
9.23	13.5% Fuel Surcharge	per nour		106.15	106.13
5.000	Recycling of Non RCRA / Non DOT regul	ated oily water @	BOL 88721	0.25	1,250.00
3,000	\$0.25 per gallon (TOC 23320 & 10% solid	•	30200721		1,200.0
	07/13/09		·		
9.5	Transportation services by CES @ \$85.00	per hour		85.00	807.50
	13.5% Fuel Surcharge	•		109.02	109.02
5,000	Recycling of Non RCRA / Non DOT regul	ated oily water @	BOL 88850	0.12	600.00
	\$0.15 per gallon (TOC 8710 & 5% solids)				
1	Washout			175.00	175.00
	1% Energy Surcharge			29.00	29.00
	1% Compliance Fee			59.02	59.02
We appreci	ate your business!		Subtotal		
			Jubiotai		\$5,960.81
	nt Policy: Any unpaid balances begining on the ue will accrue a per annum interest rate of 7.5%		Sales Tax (8.	25%)	\$0.00
tated in a f	ormalized contract.		Total		\$5,960.81

241



Bill Of Lading #:

88444

Folder ID:	H & H OII, L.P. (Pf Olly Water	lugerville, TX)	-				
Original - Sh	ipper Provided S	hort Form Straigh	t Bill of	<u> Lading – Noi</u>	t Negotiable – Do	mestic	****

SHIPPED FROM: CES Profile #

H & H Oil, L.P. 11a) HOU-2836
20909 FM 685 11b)

Pflugerville , TX 77860 11c)
(800) 777-1498 11c)

The property described below, in apparent good order, except as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which said center (the word center being understood throughout this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to carry to its unusual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. This Bitt of Lading is a receipt for goods, it is not of lisely a contract of carriage, it is mutually agreed, as to each party at any time interested in all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract between shickers and carrier or informediary.

For payment, Charges to be billed to Shipper or the "Billed to" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed to Shipper or the "Billed to" party without prior written consent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill submitted to Shipper or the "Billed to" party and sent to:

#### 

CES Environmental Services, Inc.

4904 Griggs Rd.

Houston, TX 77021

CARRIER:

CES Environmental Services, Inc.

4904 Gridas Rd.

Houston, TX 77021

This is to certify that the product stated below are properly classified, described, packaged, marked and labeled and is in proper condition for transportation according to the applicable regulations of the Department of Transportation. If this Shipment moves between to ports by a certier by water, the law requires that the Bill of Lading shall state whether it is "carrier's or shipper's weight."

Intermodal Certificate: All Information required by Federal Highway Administration regulations at 49 CFR 390.545 implementing the Intermodal Safe Container Act of 1997 is set forth on the face of this bill of lading. The shipper name herein is the tendering party.

Haz	424588	Hitter.	i iotai   Quantity	i unit i	Lesony	Description of materials, Special marks, and Exceptions			ns.	
	No.	Type	i Frimmeri	AAMAM						
No	Ť	TT	5,000	, G		Non-RCRA/Non	-DOT Regulat	ed Oily wate	er	
glighted typester	inn to provide a page sales, que este.		<del></del>	rangidani a quadrianagiran n	·					
rannonan sysk	The second sections and a second	a englished a september of	derle en mengelingsteden met gerelinen ge-		t Mind Jack Hall Lot, & John J. Jacker V. W. W. W. W. W. Schwick & Mindell Co. Jacker & John St. Specific Schwidt Schwick & Mindell Co. Jacker & Ja	dispress for the security indicated sector between the section of				
			٠,							
- Manuagem n	et film milet i en na ye de dera ku yi beren e	iki interesperatury ay mind streether.	the Traditional Property Control	an uqfirlamlal galania ir qqidhini	and the second s					
				Michael Bilahous for ray (works	tara ke ta kata guberi kawa keta terda atau ini Meta di waten ini mbabi kama kama kama kama ka kata ka kata k K	و ۱۵ ماده میرود این به درستان میشواند به مده این این میشود این این میشود این این این در داشت.	an bile ar lajularinet u mandru arbama aqueler digan getter appagigações, debit de bile	an Lathaire ann an Aire ann an		
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1	44	HUN	wec_	w				LMC		
i ar		ES Env	vironmen	ital Ser	vices, inc.		**************************************			
ile:	M	4/	Taylor	and the said of Security Office and Security	Signature: >	Mill -	Taylo)	Date	7/1/0	9
					ımental Service:	_				
Per	. Al	LON	gorin		Signature			Date	: 7/11	99
	e (Generat				(Transporter Gopy)	Pink (Receivin	ig Facility Copy)	Golden R	od (Generator	1st Copy)

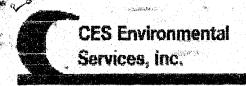
## H&H Oil, L.P. - Service Order/Bill of Lading

A 0008274					<b>A</b> (	CCT#	
GENERATOR NAME & ADDRES	SS THE RESERVE TO THE	CON	TACT NAM	мЕ, РНС	INE & EP	A ID	
Hation LP 20909 Fm 685 PRINGENUILL TX TO	3660						
TRANSPORTER	1	TRAN	USPORTE	R CONT	ACT. TR	ANS ID, 8	EPA ID
H&H Oil, L.P. 20909 FM 685 Pflugerville, TX 78660		Oper A852	ations Ma	anager-			
RECEIVING FACILITY NAME 8	& ADDRESS	CON	TACT NAM	ИЕ, PHO	NE & EP	AID	
Ces 4904 griggo Kd. Youston TX					professional and the second se		
NON HAZARDOUS RESIDUALS		SET	P/U	PRICE	EACH	TOTAL	
USED OIL		<u> </u>			<u> </u>		
USED OIL FILTERS						\$ A	
USED ANTIFREEZE		ļ <u>.</u> .		1 1 1 1	<u> </u>	1	
OILY ABSORBENTS							
SPECIFICATION USED OIL			<u> </u>				
OILY WATER			5000		<u> </u>		
GRIT TRAP					- <del> </del>		
YELLOW GREASE							3, 1
OTHER:							
SPECIAL INSTRUCTIONS:				SU	JBTOTAL		
	Is the material a		<u> </u>		TAX	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Sniffer □ Pass □ Fail Field Kit □ Pass □ Fail	"Hazardous Waste" as defined by 40 CFR 261.3?						AMT DUE
Total Halogens  □ > 1000 □ < 1000	□ Yes □ No		Same as above			MATION  No, enter billing	address be:
Is this facility a Conditionally Exempt Small Quantity Generator (CESQG) as defined by 40 CFR 261.5?	Is the material regulated under TSCA 40 CFR 761? (PCBs)						
On behalf of the Generator, I hereby certify that have been made. If the material collected is used the Generator hereby certifies that the rebuttable including, but not limited to, proper disposal, tes	ed oil as defined by 40 CFR part 279, le presumption under 40 CFR part 27	, the Gener 79 has bee	rator certifies t en rebutted. 'Ti	that the total he Generato	l halogen cont or will be respo	itent is less thar onsible for any	n 1,000ppm, or
GENERATOR SIGNATURE / DA	ATE TO THE	DRIV	ER SIGN	ATURE	/ DATE		
UMMIAR ald	1141		1.1	1	6	7//	40

20909 FM-685, Pflugerville, TX 78660 Phone: 512-990-1498; Fax: 512-990-1388; Toll Free: 800-777-1498

**Receiving Facility Signature** 

_Daté received



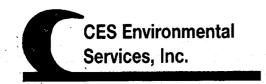
#### Transportation Work Ticket

Foider	D	. *
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H&HOil, L.P. (Pflugerville, TX)

Oily Water

Date: 7/1/2009  H & H Oil, L.P.  Client:  Phone: 9007771498  CES Environmental Services, I  Transporter:  Signature X MOMLL Alux		88444 CES Environmental Services, Inc.
Leave CES Yard: 5/5  Arrive At Customer: 8.50  Begin Loading: 9.05  Finish Loading: 940  Leave Customer: 10,20 8.5	Begin Ur Finish Ui Leave De	Destination 230  Noading: Standing: 330  Standing: CES Yard:
Customer PO #:	otal Hours; 1025	CES Unload:
Gross Weight: Tare Weight: Net Weight:		Odometer : <u>277024</u> g Odometer : <u>276685</u> les : <u>269</u>
Driver: Taylor, Matthew	Tractor # : 280	Tote #:
ignature : Baslon	Trailer # : 2067-254	
b Comments/Equipment :		



### **Inbound Load Report**

Job Number :	88444	_	and the state of t	
Type of Material:	Oily water emulsion	T 20		
Job Date:	7/1/2009			
Bill of Lading #:	88444			
Customer:	H & E Equipment			
Gross Weight:				
Tare Weight:		OR	Total Gallons Shipped: 5000	
Net Weight:				
Shipping In	formation			
Carrier:	CES Environmental S	ervices,	Inc.	
Truck Number:				
Trailer Number:	241			
CES Laborato	ry Use Only		Misc Notes:	
Specific Gravity:			85 % water 15 % Rag	
Pounds per Gallon	<b>.</b>		13 76 Kag	
Temperature:	•		-11.6	
<b>Total Gross Gallon</b>	<b>s:</b> 5000		pH 6 TOC 33820	
% Water			Phenol 25	
% Solids			Recommended surcharge of .11/gal Total price of .21/gal	
Total Net Gallons:	5000		Total price of 121/gai	
(minus water and so	lids)			
Sample Analyst:				
Jampie Alialysti	(signa	ature)		
Sample Analyst:	Al Longoria	<b>,</b>	Date:7/1/2	.009

210

## CES Environmental Services, Inc.

White (Generator Return Copy)

Yellow (Transporter Copy)

Bill Of Lading #:

88724

7		****	,					
Fold	ler ID :		H OII, L.P. ( Water	Pflugervill	e, TX)			
Öri	ginal –	Shipper	Provided	Short F	om Straight Bill of Lading – Not Negotiable – Domestic			
SH	IPPED	FRON	A:		CES Profile #			
H	IO H	, L.P.			11a) HOU-2836			
20909 FM 685 Pflugerville , TX 77860					11b)			
		-	77860		11c)			
(80	10) 777	-1498			11c)			
said of carry goods any till between	:anter (the ) to its unusu ; it is not of me interest en shipper : wment: Cha	word carrier usi piace of o itself a cont ed in all or a and carrier o	being understo delivery at said ract of carriage my of said prop or intermediary	od throughou destination, this mutual erty, that eve or the "Bille	cept as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which it this as meaning any person or corporation authorized to be in possession of the properly under the contract) agrees to if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for ly agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party by agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party by agreed, as to each party service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract of to party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed sent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill			
SUDM	tted to Ship	per or the "S	lilled to" party a		CARRIER:			
CONSIGNED TO: CES Environmental Services, Inc			_	ices In	<del></del>			
4904 Griggs Rd.			tuni wort	iuwu, iii	4904 Griggs Rd.			
Houston , TX 77021			021		Houston, TX 77021			
-laz	OPELINATE CONTRACTOR	alner Type	Total	Unit     Wt/Voi	Description of Materials, Special Marks, and Exceptions			
No	1	TT	వే, 400	G	Non-RCRA/Non-DOT Regulated Oily water			
		ri e ri	~: : n					
inip Per	/ <b>`\</b>	нан	Oil, L.P.		Signature: Monicy & Club Day: 7/9/09			
larr	ier C	ES Env	vironmen	tal Sen	vices, inc.			
∍er	: M	4H	TAKOV		Signature: Matt Taylor Date: 7/9/09			
leci	eiving	Facilit	y CES	Enviror	nmental Services, Inc.			
Per	:AI	Low	avia		Signature: Date: 7/9/09			

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

## H&H Oil, L.P. - Service Order/Bill of Lading

÷.0008470

ACCT#

GENERATOR NAME & ADDRES	SS	CON	TACT NAM	1E, PHONE & E	PA ID	Arrende .
HEHOILUP 20009 FM1085 PFILICENVILL TX	A MAN PROPERTY FOR	(120°45)				
20009 FMILORS		- 4.				
PANICIPINATU TX						1.1
TRANSPORTER				R CONTACT, TI inager—800-7		EPA ID
H&H Oil, L.P. 20909 FM 685		A852		mayer—600-7	//-1490	
Pflugerville, TX 78660		TXD9	8799088	4		
RECEIVING FACILITY NAME 8	ADDRESS	CONT	ACT NAM	IE, PHONE & E	PA ID	. I≖
Ces		.:				
Houston .	Taken .			Mark		
NON HAZARDOUS RESIDUALS		SET	P/U	PRICE EACH	TOTAL	на 30 година на 30 година на 30
USED OIL						
USED OIL FILTERS		3				
USED ANTIFREEZE				******		
OILY ABSORBENTS					The second secon	
SPECIFICATION USED OIL						
OILY WATER			STOC			
GRIT TRAP			,			
YELLOW GREASE						
OTHER:				***		
SPECIAL INSTRUCTIONS: \				SUBTOTAL		
	Is the material a			TA)		
Sniffer □ Pass □ Fail	"Hazardous Waste" as					
Field Kit □ Pass □ Fail	defined by 40 CFR 261.3?					AMT DUE
Total Halogens	□ Yes □ No	GENE	RATOR B	ILLING INFOR	RMATION	or County
□ > 1000 □ < 1000			and the second	? □ Yes □ No I	±0.00000	ddress be-
		low.		-148		15 群夏
Is this facility a Conditionally Ex- empt Small Quantity Generator	Is the material regulated under TSCA 40					
(CESQG) as defined by 40 CFR	CFR 761? (PCBs)					
261.5? □ Yes □ No	□ Yes □ No					
On behalf of the Generator, I hereby certify that	the information on this form is true	and accur	ate and no wi	llful omissions or misre	nrecentations of th	e material
have been made. If the material collected is use the Generator hereby certifies that the rebuttable	d oil as defined by 40 CFR part 279,	the Gener	ator certifies ti	hat the total halogen o	ontent is less than :	1,000ppm, or
including, but not limited to, proper disposal, tes	ting and transportation if the mater	ial is deter	mined to be a	hazardous waste or co	ntains PCBs.	
GENERATOR SIGNATURE / DA	TE CONTRACTOR OF THE SECOND	DRIV	ER SIGNA	ATURE / DATE		
monica. 10 Old	GL 1		: Al	e for		
Receiving Facility Signature				Date received	en e	

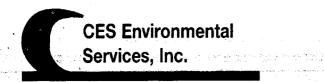
20909 FM-685, Pflugerville, TX 78660 Phone: 512-990-1498; Fax: 512-990-1388; Toll Free: 800-777-1498

# CES Environmental * Services, Inc.

4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 876-1876

#### Transportation Work Ticket

Folder II) : H & H Oil, L.P. (Pflugerville, TX) Oily Water			
Date: 7/9/2009	Manifest #:		
H&HOII, L.P.	Ticket:	68721	
CES Environmental Services, Inc.  Transporter: MONUL COCCU Signature 7:40  Leave CES Yard: 7:40  Arrive At Customer: 7:30  Begin Loading: 73.00  Leave Customer: 73.00  Customer PO #: Total	Signature  Arrive At  Begin Un  Finish Un  Leave De	Destination  loading: cestination: cestination: cestination:	· ————————————————————————————————————
Gross Weight:  Tare Weight:  Net Weight:		Odometer: 377803 277423 Joseph Jane	
Driver: Taylor, Watthewy Tra	ctor # : 280	Tote#:	
in a consistency of the consiste	ailer # : 252 - 72	O Box #:	
b Comments/Equipment :			



## **Inbound Load Report**

Job Number :	88721	-			
Type of Material:	Oily Wate				
Job Date:	7/9/2009				
Bill of Lading #:	88721			•	
Customer:	H & H Oil, L.P.				
Gross Weight:					
Tare Weight:		OR	Total Gallons S	Shipped:	5000
Net Weight:	· · · · · · · · · · · · · · · · · · ·				
Shipping Inf	ormation				
Carrier:	CES Environmental S	ervices,	Inc.		
Truck Number:					
Trailer Number:	270				
CES Laborator	y Use Only		Misc Notes:		
Specific Gravity:			pH= 7		
Pounds per Gallon:			TOC= 23320 Phenol= 20		
Temperature:			Solids= 10%		
<b>Total Gross Gallons</b>	5000		FP >140 10% Org 10%	Rag 70%	H2O
% Water			_	_	
% Solids	10%		DRS recommend	led surchar	ges: TOC= \$ 0.07 / gal Phenol= \$ 0.04 / gal
Total Net Gallons:	5000				Solids= \$0.04 / gal
(minus water and soli	ids)				
Sample Analyst:					
	(signa	ature)			<b>=</b> /2 /2 2 2
Sample Analyst:	Julius Prantil			Date:	7/9/2009

## CES Environmental Services, Inc.

White (Generator Return Copy)

Yellow (Transporter Copy)

Bill Of Lading #:

88850

Folder iD:   H & H OII, L.P. (Pflugervill	9. TX)
Original – Shipper Provided Short F	orm Straight Bill of Lading – Not Negotiable – Domestic
SHIPPED FROM:	CES Profile #
H&HOII, L.P.	11a) HOU-2836
20909 FM 685	11b)
Pflugerville , TX 77860	11c)
(800) 777-1498	11c)
said carrier (the word carrier being understood throughou carry to its unusual place of delivery at said destination, goods; it is not of itself a contract of carriage, it is mutual any time interested in all or any of said property, that eve between shipper and carrier or intermediary.  For payment: Charges to be billed to Shipper or the "Billie	cept as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which it this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for by agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party a service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract dito" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed sent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill
CONSIGNED TO :	CARRIER:
CES Environmental Services, In	
4904 Griggs Rd.	4904 Griggs Rd.
Houston , TX 77021	Houston , TX 77021
ntermodal Certificate: All Information required by Federal orth on the face of this bill of lading. The shipper name he laz Container Total Unit No. Type Quantity Wt/Vol	Highway Administration regulations at 49 CFR 390.549 implementing the intermodal Safe Container Act of 1992 is set rein is the tendering party.  Description of Materials, Special Marks, and Exceptions
No 1 TT 5,000 G	Non-RCRA/Non-DOT Regulated Oily water
Annihim Annihim and an annihim and an annihim and an	
Shippes: H & H Oil, L.P.	
Per X	Signature: MONICA Oldusony: 7/13/09
Carrier CES Environmental Sen	//ces, inc.
	Signature: Matt Taylo Date: 7/13/09
leceiving Facility CES Enviror	imental Services, Inc.
Per: Al Langar's	Signature : Date : 7 17/45

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

## **H&H Oil, L.P. - Service Order/Bill of Lading**

A.J. 18485				A	CCT#	<u> </u>
GENERATOR NAME & ADDRES	S Supplied	(CON	ACT NAM	IE, PHONE & EI	PA ID	
2850GI FM WAS	Anna de la Maria della d			•		
TRANSPORTER	Fig. 1 Company of the			00.540000	ANS ID, & EPA I	.D=
H&H Oil, L.P. 20909 FM 685		Opera   A852		nager—800-77	77-1498	
Pflugerville, TX 78660			8799088	<b>4</b>		19
RECEIVING FACILITY NAME &	ADDRESS	CONT	ACT NAM	E, PHONE & EI	PAID	
Cos						
499491999 X					9.	,
NON HAZARDOUS RESIDUALS		SET	P/U	PRICE EACH	TOTAL	entra reta
USED OIL						
USED OIL FILTERS						
USED ANTIFREEZE	,					
OILY ABSORBENTS			41.j			
SPECIFICATION USED OIL					And the second	
OILY WATER			SW			
GRIT TRAP					Age 1	
YELLOW GREASE		ø				
OTHER:					9/5	
SPECIAL INSTRUCTIONS:			i.	SUBTOTAL	Start Starter	200
	<u> </u>			TAX		
Sniffer □ Pass □ Fail	Is the material a "Hazardous Waste" as					pro 3
Field Kit □ Pass □ Fail	defined by 40 CFR 261.3?				АМТ [	DUE
Total Halogens	□ Yes □ No	GENE	RATOR B	ILLING INFOR	MATION	
□ > 1000 □ < 1000		Address low.	same as above	? ☐ Yes ☐ No If	No, enter billing address b	)e-
Is this facility a Conditionally Ex-	Is the material regu-					
empt Small Quantity Generator (CESQG) as defined by 40 CFR	lated under TSCA 40 CFR 761? (PCBs)					
261.5?	□ Yes □ No					
☐ Yes ☐ No				·		
On behalf of the Generator, I hereby certify that have been made. If the material collected is used the Generator hereby certifies that the rebuttable including, but not limited to, proper disposal, tes	d oil as defined by 40 CFR part 279, e presumption under 40 CFR part 27	the Gener 79 has bee	ator certifies the rebutted. The	nat the total halogen co ne Generator will be res	ntent is less than 1,000ppr ponsible for any and all co	m, or
GENERATOR SIGNATURE / DA		DRIV	ER SIGNA	TURE / DATE		
4Monica Clau			· M	web)	1/13/09	
Receiving Facility Signature						
	Jan Carlotte Company					

## CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021 Tel. (713) 876-1460 Fax. (713) 876-1876

#### Transportation Work Ticket

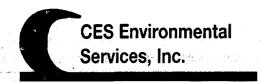
Oily Water	ville, TX)	
)ate: 7/13/2009	Manifest # :	
H&HOII, L.P. Dient :	Ticket:	<b>32950</b>
Phone: <u>8007771498</u> CES Environmental Sortansporter;:	Consignee :	CES Environmental Services, Inc.
signature FMONICA U	Signature	
Leave CES Yard: (x30) Arrive At Customer: 720 Begin Loading: 10:05 Finish Loading: 10:45 Leave Customer: 11:00	Begin Un Finish Un Leave De	$\mathcal{A}$
Customer PO #:	Total Hours:	CES Unload: UE
a a a a a a a a a a a a a a a a a a a	angabiging an angan pangangang anggal mala salahan dalah nagan angan angan angan angan angan angan angan angan Angan angan an	1dometer 22 23 22
Gross Weight:	Ending C	111111111111111111111111111111111111111
Gross Weight: Tare Weight:	· · · · · · · · · · · · · · · · · · ·	Odometer : 277488
	· · · · · · · · · · · · · · · · · · ·	Odometer: 277958
Tare Weight:	Begining	Odometer : 277958
Tare Weight: Net Weight:	Begining Total Mil	Odometer : 277958 es : 270
Tare Weight:  Net Weight:  Driver: Taylor, Matthew	Begining Total Mil Tractor # : 280 Trailer # : 271	Odometer : 277928 es : 270 Tote # :
Tare Weight:  Net Weight:  Driver: Taylor, Matthew  gnature:	Begining Total Mil  Tractor #: 286	Odometer : <u>277928</u> es : <u>270</u> Tote # :
Tare Weight:  Net Weight:  Driver: Taylor, Matthew  gnature:	Begining Total Mil Tractor # : 280 Trailer # : 271	Odometer : <u>277958</u> es : <u>270</u> Tote # :
Tare Weight:  Net Weight:  Driver: Taylor, Matthew  gnature:	Begining Total Mil Tractor # : 280 Trailer # : 271	Odometer : <u>277958</u> es : <u>270</u> Tote # :

Yellow (CES Office / Silling)

White (CES Office)

Golden Rod (Gustomer)

Pink (CES Office / IFTA)



### **Inbound Load Report**

Job Number :	88850						
Type of Material:	Oily Water		<u>.</u>				
Job Date:	7/13/2009						
Bill of Lading #:	88850						
Customer:	H & H Oil, L.P.						
Gross Weight:							
Tare Weight:		OR	Total Gallons	Shipped:	5000	<u>.                                      </u>	
Net Weight:							
Shipping In	formation						
Carrier:	CES Environmental S	ervices, I	inc.				
Truck Number:							
Trailer Number:	271						
CES Laborato	ry Use Only		Misc Notes:				
Specific Gravity:			DI				
Pounds per Gallon	<u></u>		Ph= 5.5 TOC= 8710				
Temperature:			Phenol= 10				
<b>Total Gross Gallon</b>	5000		Solids= 5%				
% Water			DRS recommen	nded surcha	rge: T0	OC= \$0.02 /gal	
% Solids	5%					Solids= \$0.03 /ga	
<b>Total Net Gallons:</b>	5000		Total surcharge (	@ \$0.1 <b>2</b> per	gallon		
(minus water and so	lids)						
Sample Analyst:							
Sample Allalyst.	(signa	ature)	· · · · · · · · · · · · · · · · · · ·	_			
Sample Analyst:	Julius Prantil			Date:	7.	/13/2009	
						,,	

## CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676

COPY

.

Invoice

Invoice #

57786

Date

7/21/2009

Bill To:

H&H Oil LP

20909 FM 685

Pflugerville, Texas 78660 Attn: Crystal Reininger

	P.O. No	o. Terms	Pro	oject
		Net 30		
uantity	Description	Manifest #	Rate	Amount
	07/01/09		05.00	074.05
10.25	Transportation services by CES @ \$85.00 per hour		85.00	871.25
<i>~</i> 000	13.5% Fuel Surcharge	er @ BOL 88444	117.62	117.62
5,000	Recycling of Non RCRA / Non DOT regulated oily wat \$0.21 per gallon (TOC 33820 & 25ppm)	er @   BOL 88444	0.21	1,050.00
	30.21 per ganon (10C 33820 & 23ppm)			
	07/09/09			
9.25	Transportation services by CES @ \$85.00 per hour		85.00	786.25
	13.5% Fuel Surcharge	·	106.15	106.15
5,000	Recycling of Non RCRA / Non DOT regulated oily wat	er @ BOL 88721	0.25	1,250.00
	\$0.25 per gallon (TOC 23320 & 10% solids)			
	07/13/09			
9.5	Transportation services by CES @ \$85.00 per hour		85.00	807.50
	13.5% Fuel Surcharge		109.02	109.02
5,000	Recycling of Non RCRA / Non DOT regulated oily wat	er @ BOL 88850	0.12	600.00
	\$0.15 per gallon (TOC 8710 & 5% solids)			
1	Washout		175.00	175.00
	1% Energy Surcharge		29.00	29.00
	1% Compliance Fee		59.02	59.02
e appreci	ate your business!	Subtotal	<u></u>	
				\$5,960.8
count is d	ent Policy: Any unpaid balances begining on the 30th day after the will accrue a per annum interest rate of 7.5%, unless otherw		3.25%)	\$0.0
ited in a f	formalized contract.	Total		

241

## CES Environmental Services, Inc.

white (Generator Return Copy)

Yellow (Transporter Copy)

Bill Of Lading #:

88444

\$ . 5	ervices, Inc.		그 경기화와 출연한 연락 속소설별	
Folder ID:	H & H Oil, L.P. Olly Wafer	(Pflugeryl)	g. TX)	
Original – 51	nipper Provide	d Short F	orm Straight Bill of Lading – Not Negotiable	– Domestic
SHIPPED I	ROM:		CES Profile #	
H&HOII,	L.P.		11a) HOU-2836	
20909 FM			116)	
	TX 77860		11c)	
(800) 777-	1498		11c) 1 / 1 - 4 1 11c) 1 / 1 / 1 / 1	
said carrier (the was carry to its unusual goods; it is not of its any time interested between shipper an For payment: Chang to Shipper or time "Bi	od carrier being underst place of delivery of sail self a contract of carriag in all or any of said pro d carrier of intermedian as to be billed to Shippe lied to party without pol	ood througho d destination, ie. It is makes perly, that ev- y. or the "Billion or written cor	cept as noted (content and condition of packages unknown), marked, co if this as meaning any person or corporation authorized to be in possess if on its route, otherwise to deliver to another carrier on the route to said by agreed, as to each carrier of all or as to any said over all or any portion by service to be performed hereunder shall be subject to all the terms are do" party are set forth in the governing contract with Shipper. No charge sent of Shipper. The extra copy of this Bill of Lading, furnished at the firm	sion of the property under the contract) agrees to distinguish. This Bill of Lacing is a receipt for an of said route to destination, and as to each party and conditions contained in the applicable contract es other than those contained therein may be billed
managaran and an ang an ang an ang ang ang ang ang an	r or the "Blited to" party	and sent to:		
CONSIGNE			CARRIER:	
The state of the s	nmental Serv	rices, In	and the second s	Services, Inc.
4904 Grigg Houston . T			4904 Griggs Rd. Houston, TX 77021	
applicable regulation it is "carrie"s or ship intermodal Carificati	s of the Department of ' per's weight." I All Information requir	Transportation ed by Federa	classified, described, packaged, marked and labeled and is in proper of if this Shipment moves between to ports by a carrier by water, the law-lifetimes. Administration regulations at 49 CFR 390.54© implementing trein is the tendering party.	requires that the Bill of Lading shall state whether
Haz Contai	,	Unit	Description of Materials, Special Marks	and Exceptions
No.	Type Quantity	WtVoi	기계 시시 시설하면 하면 하는 이번 있었다.	
No 1	TISport	9 G	Non-RCRA/Non-DOT Regula	ated Oily water
	&HOII, LP	7 l		7100
per: M			VSignature :	Date :
Carrier CE	S Environme	ntal Ser	vices, Inc.	
			Signature: Malla Janka	Date: 7/1/09
Receiving F	actity CES	FUAILO	imental Services, Inc.	
			Signature:	Date: 7/1/09
			nmental Services, Inc.	

Pink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

### H&H Oil, L.P. - Service Order/Bill of Lading

A 0008274 ACCT# GENERATOR NAME & ADDRESS CONTACT NAME, PHONE & EPA ID HS HON LP 20909 Fm 685 PAugerVIIL TX 78660 TRANSPORTER TRANSPORTER CONTACT, TRANS ID, & EPA ID Operations Manager-800-777-1498 H&H Oil, L.P. A85213 20909 FM 685 TXD987990884 Pflugerville, TX 78660 **CONTACT NAME, PHONE & EPA ID RECEIVING FACILITY NAME & ADDRESS** 4904 griggs Rd Houston T NON HAZARDOUS RESIDUALS SET P/U PRICE EACH TOTAL **USED OIL USED OIL FILTERS USED ANTIFREEZE** OILY ABSORBENTS SPECIFICATION USED OIL **OILY WATER GRIT TRAP** 

Sniffer Field Kit	□ Pass	□ Fail	Is the material a "Hazardous Waste" as defined by 40 CFR 261.3?	AM	T DUE
Total Halog	•	) □ < 1000	□ Yes □ No	GENERATOR BILLING INFORMATION  Address same as above?  Yes  No  Yes, enter billing address low.	ss be-
empt Small	ty a Condition Quantity Gestioned by	enerator 40 CFR	Is the material regulated under TSCA 40 CFR 761? (PCBs)  ☐ Yes ☐ No		

YELLOW GREASE

SPECIAL INSTRUCTIONS:

OTHER:

GENERATOR SIGNATURE / DATE

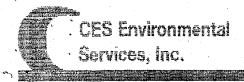
DRIVER SIGNATURE / DATE

the Generator hereby certifies that the rebuttable presumption under 40 CFR part 279 has been rebutted. The Generator will be responsible for any and all costs

Receiving Facility Signature ________Date received______

**SUBTOTAL** 

TAX



#### Transportation Work Ticket

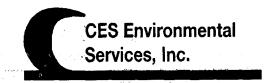
Folder ID: H & H Oil, L.P. (Pflugerville, TX) Oily Water				
Date: 7/1/2009	Wanifest # :			
H&HON, L.P.	Ticket:	88444		
Phone: 8007771498  CES Environmental Services, In	Consignee :	CES Environ	mental Services, Inc.	
Transporter: Signature Y Monuce aldus	-			
Leave CES Yard: 5%5		Destination	230	
Arrive At Customer : 8.39  Begin Loading : 9:05	Begin Unl Finish Un	ioading:	330	•
Finish Loading: 940  Leave Customer: 10,00	Leave De: Arrive At	stination : CES Yard :		
Customer PO #:	tal Hours: 2025		CES Unioad:	4
Gross Weight:	Ending O	dometer :	277054	
Tare Weight: Net Weight:	Begining Total Mile		276685 269	
Oriver: Taylor, Matthew T	ractor # ; 280		loie#:	
Signature : Jaylor	Trailer # : <del>200</del> 734/		Box #:	
lob Comments/Equipment :				
	Perior annual and age transport from troops and or sequence operation and annual sequence of transports and tr			
				، جست
	ir Helin nyel () roat i ji ja nelektra asaa (lephanasyayn nyelayayayaya ni helin mikal)	odernika agasta sindan kenangan kenangan di perbanasa da sa	ren samenteen, en las species (species en la constitución de la consti	

Yellow (CES Office / Billing)

Write (GES Office)

PINK (CES Office / IFTA)

Golden Rod (Gustomer)



## **Inbound Load Report**

Job Number :	88444					
Type of Material:	Oily water emulsion					<b>X</b> -
Job Date:	7/1/2009					
Bill of Lading #:	88444					
Customer:	H & E Equipment					
Gross Weight:						
Tare Weight:		OR	<b>Total Gallons</b>	Shipped: 5	5000	· 
Net Weight:						
Shipping In	formation					
Carrier:	CES Environmental S	Services,	Inc.			
Truck Number:						
Trailer Number:	241					
CES Laborato	ry Use Only		Misc Notes:			
Specific Gravity:	·		85 % water 15 % Rag			
Pounds per Gallon	·		15 % Kay			
Temperature:			pH 6			
<b>Total Gross Gallon</b>	<b>s:</b> 5000		TOC 33820			ļ
% Water			Phenol 25		11/	
% Solids			Recommended s Total price of .21		L1/gai	
Total Net Gallons:	5000		Ĺ			
(minus water and so	lids)					
Sample Analyst:						
	(sign	ature)		_		
Sample Analyst:	Al Longoria			Date:	7/1/2009	

27

### CES Environmental Services, Inc.

Bill Of Lading #:

88721

L	Chimmer Demisided Chem	f Form Straight Ri	II of I adino – Not	Negotiable – Domest	is:
e de la companya de l	Only Water				
Folder ID:		VIIIe, TX)			

 SHIPPED FROM:
 CES Profile #

 H & H Oil, L.P.
 11a) HOU-2836

 20909 FM 685
 11b)

 Pflugerville , TX 77860
 11c)

 (800) 777-1498
 11c)

The property described below, in apparent good order, except as inded (content and condition of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to carry to its unusual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for goods: it is not of itself a contract of certage. It is mutually agreed, as to each carrier of all or as to any said over all or any portion of said property, that every service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract octobers and carrier or informediacy.

For payment: Charges to be billed to Shipper of the "Billed to" pany are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed to Shipper or the "Billed to" pany without prior written consent of Bripper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill submitted to Shipper or the "Billed to" pany and serie to.

#### CONSIGNED TO:

CES Environmental Services, Inc.

4904 Griggs Rd.

Houston, TX 77021

**CARRIER:** 

CES Environmental Services, Inc.

4904 Griggs Rd.

Houston, TX 77021

This is to certify that the product stated below are properly classified, described, packaged, marked and labeled and is in proper condition for transportation according to the applicable required one of the Department of Transportation, if this Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state whether it is "carrier's or shipper's weight."

Intermedial Certificate: All Information required by Federal Highway Administration requiations at 49 CFR 390.5449 implementing the Intermedial 8afe Container Act of 1992 is set fortil or line face of this bill of lasting. The shipper name herein is the tendening party.

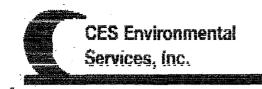
Haz	Conti	quet	Total	Unit	Description of Materials, Special Marks, and Exceptions
k.	No.	Type	Quantity	MANAGI	
Nc	1	TI	J	G	Non-RCRA/Non-DOT Regulated Olly water
			X,7500	eminimus summa summere h	

Shipper: H&HOil, L.P.	And the second s	Λ	
Per:\	Signature: Mong	Catalletone:	7/9/09
Carrier CES Environmental S	ervices, Inc.		
Per: Mast Taylou	Signature:	Date:	7/9/02
Receiving Facility CES Envi	ronmental Services, Inc.		
per: Al Loyers	Signature :	Date:	7/2/09
White (Generator Return Copy) Yell	ow (Transporter Cooy) Pink (Rece	elving Facility Copy) Golden Rod	(Generator 1st Copy

### H&H Oil, L.P. - Service Order/Bill of Lading

A 0008470		ACCT#			
GENERATOR NAME & ADDRES		CON	TACT NAM	NE, PHONE & ER	PAID
HEHOILLP 2009 FM 1085 PAUGENING TX					
TRANSPORTER					ANS ID, & EPA ID
H&H Oil, L.P. 20909 FM 685 Pflugerville, TX 78660		A852		anager—800-77 84	77-1498
RECEIVING FACILITY NAME 8	ADDRESS	CON	FACT NAM	1E, PHONE & EI	PAID
Ces.					
Houston					
NON HAZARDOUS RESIDUALS		SET	P/U	PRICE EACH	TOTAL
USED OIL		<u>                                     </u>			
USED OIL FILTERS				<u> </u>	
USED ANTIFREEZE			L		L
OILY ABSORBENTS			l	<u> </u>	
SPECIFICATION USED OIL					
OILY WATER		<u></u>	SOOC		
GRIT TRAP					
YELLOW GREASE					
OTHER:					
SPECIAL INSTRUCTIONS:		<u></u>		SUBTOTAL	
		<u> </u>		TAX	
Sniffer □ Pass □ Fail Field Kit □ Pass □ Fail	Is the material a "Hazardous Waste" as defined by 40 CFR				AMT DUE
Total Halogens ☐ > 1000 ☐ < 1000	261.3? □ Yes □ No			BILLING INFOR	
Is this facility a Conditionally Exempt Small Quantity Generator (CESQG) as defined by 40 CFR 261.5?	Is the material regulated under TSCA 40 CFR 761? (PCBs)  ☐ Yes ☐ No				
On behalf of the Generator, I hereby certify that have been made. If the material collected is use the Generator hereby certifies that the rebuttabl including, but not limited to, proper disposal, tes	d oil as defined by 40 CFR part 279, e presumption under 40 CFR part 2	, the Gene 79 has bee	rator certifies t en rebutted. T	hat the total halogen cor he Generator will be resp	ntent is less than 1,000ppm, or consible for any and all costs
GENERATOR SIGNATURE / DA		DRIV	ER SIGN	ATURE / DATE	anna dula dia 2014 menanggan dia Milasaha, pendaduk dia 2014 m Milasaha, pendaduk dia 2014 menggan dia 1914 menggan bermanan dia 1914 menggan bermanan dia 1914 menggan berma
monion alla	ULA .		Ol	ylor	
Receiving Facility Signature		<u> </u>			

20909 FM-685, Pflugerville, TX 78660 Phone: 512-990-1498; Fax: 512-990-1388; Toll Free: 800-777-1498



#### Transportation Work Ticket

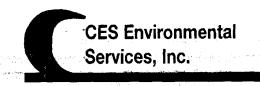
White (CES Office)

Folder ID: H & H Oil, L.P. (Pflugerville, TX) Oily Water			
Date: 7/9/2009	Manifest #:		
H & H Oil, L.P. Client:	Ticket:	86721	
Phone: <u>8007771498</u>	Consignee :	CES Environr	nental Services, Inc.
Transporter: CES Environmental Services, Inc. Signature CES Environmental Services, Inc.	Signature		
Leave CES Yard: 7:40  Arrive At Customer: 11:20	:	Destination oading :	400
Begin Loading: 1/.30	Finish Un	loading :	<u> 500 </u>
Finish Loading: 1/:50	Leave Des	stination:	
Leave Customer: 12:00	Arrive At	CES Yard:	
Customer PO #:	Hours:	april 1	CES Unload:
Gross Weight:	Ending O	dometer :	277803
Tare Weight:	Begining	Odometer:	277433
Net Weight:	Total Mile	35 :	370
Driver: Taylor, Matthew Tra	ctor # : 280		oie # :
Signature : Tra	iller # : <u>252 2 7</u> /	2 E	3ox # :
ob Comments/Equipment :			
	**************************************	·	
			***************************************
		······································	**************************************

Yellow (CES Office / Billing)

PINK (CES Office / IFTA)

Golden Rod (Customer)



### **Inbound Load Report**

Job Number : Type of Material:	88721 Oily Wate					
Job Date: Bill of Lading #: Customer:	7/9/2009 88721 H & H Oil, L.P.					
Gross Weight: Tare Weight: Net Weight:		OR	Total Gallons	<b>Shipped:</b> 5	000	
Shipping In	formation					
Carrier: Truck Number: Trailer Number:	CES Environmental S	Services,				
CES Laborato	ry Use Only		Misc Notes:			
Specific Gravity: Pounds per Gallon: Temperature: Total Gross Gallons			pH= 7 TOC= 23320 Phenol= 20 Solids= 10% FP >140 10% Org 10%	% Rag 70% F	120	
% Water % Solids Total Net Gallons:	<u>10%</u> 5000		DRS recommer	nded surcharge	es: TOC= \$ 0.07 / Phenol= \$ Solids= \$0	0.04 / gal
(minus water and sol						
Sample Analyst:	(sign	ature)		-		
Sample Analyst:	Julius Prantil			Date:	7/9/2009	

# CES Environmental Services, Inc.

Bill Of Lading #:

88850

Folder ID:	Services, Inc.	
i diese in	Oily Waler	
Original - S	Shipper Provided Short Fo	om Straight Bill of Lading – Not Negotiable – Domestic
SHIPPED	FROM:	CES Profile #
H&HOII,	L.P.	11a) HOU-2836
20909 FM	685	ロス (1) (4) (1) (1) (1) (1) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
* . *	e, TX 77860	日子 <b>(</b> 1981年) - 1. <b>11c)</b> 日 - 1.11c - 1
(800) 777-	-1498	
seld carrier (the wo carry to its unusus goods; it is not of ! any time intereste between stipper a	ord carrier being understood throughout is place of delivery at said destination, if taself a contract of carriage, it is mutually id in all or any of said property, that even and carrier or intermediany.	ept as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for agreed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each party service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable contract.
to Stapper or the "E		to" party are set forth in the governing contract with Shipper. No charges ofter than those contained therein may be bill and of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill the shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill
CONSIGN	ED TO:	CARRIER:
	onmental Services, Inc	CES Environmental Services, Inc.
4904 Grigo	us Rd.	4904 Griggs Rd.
Houston,	and the control of th	Houston, TX 77021 Ibssified, described, packaged, marked and labeled and is in proper condition for transportation according to the
Haz Conta	this bill of lading. The shipper name har	tighway Administration regulations at 49 CFR 590.542 implementing the Intermodal Safe Container Act of 1992 is set an is the tendering party.  Description of Materials, Special Marks, and Exceptions
No 1	TI 5,000 G	Non-RCRA/Non-DOT Regulated Oily water
The second secon		
Shipper: L	H&HOI(LP	
Per X		Signature: MONICA aldustrate: 7/13/09
Carrier CE	ES Environmental Serv	ices, inc
Per : //2	HTaylor	Signature: Matt Taylor Date: 7/13/09
Receiving l	Facility CES Environ	mental Services, Inc.
Per: Al	Lengeria	Signature: Date: 7/13/59
Villia Manareto	or Return Copy) Yellow (	Transporter Copy) Pink (Receiving Facility Copy) Golden Rod (Generator 1st Copy)

#### H&H Oil, L.P. - Service Order/Bill of Lading

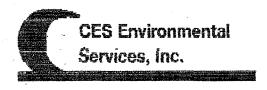
A 0008485 ACCT# **GENERATOR NAME & ADDRESS CONTACT NAME, PHONE & EPA ID** 109 FM 685 TRANSPORTER TRANSPORTER CONTACT, TRANS ID, & EPA ID Operations Manager-800-777-1498 H&H Oil, L.P. A85213 20909 FM 685 TXD987990884 Pflugerville, TX 78660 **CONTACT NAME, PHONE & EPA ID RECEIVING FACILITY NAME & ADDRESS** NON HAZARDOUS RESIDUALS SET P/U **PRICE EACH TOTAL USED OIL USED OIL FILTERS USED ANTIFREEZE OILY ABSORBENTS** SPECIFICATION USED OIL **OILY WATER GRIT TRAP** YELLOW GREASE OTHER: SPECIAL INSTRUCTIONS: **SUBTOTAL** TAX Is the material a Sniffer □ Pass □ Fail "Hazardous Waste" as Field Kit □ Pass □ Fail defined by 40 CFR **AMT DUE** 261.3? Total Halogens □ Yes □ No **GENERATOR BILLING INFORMATION** □ > 1000 □ < 1000 Address same as above? 

Yes 

No If No, enter billing address below. Is the material regu-Is this facility a Conditionally Exlated under TSCA 40 empt Small Quantity Generator (CESQG) as defined by 40 CFR CFR 761? (PCBs) 261.5? □ Yes □ No □ Yes □ No On behalf of the Generator, I hereby certify that the information on this form is true and accurate, and no willful omissions or misrepresentations of the material have been made. If the material collected is used oil as defined by 40 CFR part 279, the Generator certifies that the total halogen content is less than 1,000ppm, or the Generator hereby certifies that the rebuttable presumption under 40 CFR part 279 has been rebutted. The Generator will be responsible for any and all costs including, but not limited to, proper disposal, testing and transportation if the material is determined to be a hazardous waste or contains PCBs.

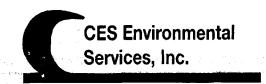
Receiving Facility Signature	Date received
Myonica alauto	1 (Maylar) 1/13/69
Mhair allala	1 1 A A 2/ /2
GENERATOR SIGNATURE / DATE	DRIVER SIGNATURE / DATE

20909 FM-685, Pflugerville, TX 78660 Phone: 512-990-1498; Fax; 512-990-1388; Toll Free: 800-777-1498



#### Transportation Work Ticket

Folder ID: H & H Oil, L.P. (Pfluger Oily Water	ville, TX) 	
Date: 7/13/2009	Manifest # :	
H & H Oil, L.P. Client:	Ticket:	88850
Phone: 2007771498  CES Environmental Se	Consignee :	CES Environmental Services, Inc
Fransporter : Signature & Monica a	klus Signature	
Leave CES Yard : <u>(e-30</u> Arrive At Customer : <u>950</u>	Arrive At Begin Un	Destination <u>2:00</u> loading:
Begin Loading: 10:05 Finish Loading: 10:45		lloading: <u>400                                   </u>
Leave Customer: 11:00		CES Yard :
Customer PO #:	Total Hours:	CES Unload: 🚫
Gross Weight :	Ending (	Odometer: 27 8278
Tare Weight:		Odometer : <u>277908</u> es : <u>370</u>
Net Weight:	Total Mil	es: <u>2(0</u>
Driver: Taylor, Matthew	Tractor # : 280	Tote # :
gnature : Jaylo)	Trailer # : 271	Box # :
o Comments/Equipment :		
againment to continue the continue the continue the continue the continue the continue to the continue the co	ett Pallitikk (1966-1954-1954-1954), des States Bendinkt (1967-1968-1968), Tendensyne, skyllen (1967-1968-1960)	
White (CES Office) Yellow (CE	S Office / Billing) Pink (CE	S Office / IFTA) Golden Rod (Custom)



## **Inbound Load Report**

Job Number :	88850	_				
Type of Material:	Oily Water					
Job Date:	7/13/2009					
Bill of Lading #:	88850					
Customer:	H & H Oil, L.P.					
0 111 / 11						
Gross Weight:						
Tare Weight:		OR	Total Ga	llons Shipped:	5000	
Net Weight:						
Shipping In	formation					
Carrier:	CES Environmental Se	ervices,	Inc.			
Truck Number:						
Trailer Number:	271		•			
CES Laborato	ry Use Only		Misc Notes	<b>5</b> :		
Specific Gravity:			Di F.F.			
Pounds per Gallon:			Ph= 5.5 TOC= 87:	10		
Temperature:			Phenol= 1	10		
<b>Total Gross Gallons</b>	5000		Solids= 5	%		
% Water			DRS recor	mmended surcha		
% Solids	5%				Solids	s= \$0.03 /gal
Total Net Gallons:	5000		Total surcha	arge @ \$0.15 per	gallon	
(minus water and sol	ids)					
Sample Analyst:						
	(signa	ture)		<del></del>		
Sample Analyst:	Julius Prantil			Date:	7/13/20	09

## **CES Environmental** Services, Inc.

4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676

## **Invoice**

Date	Invoice #
7/9/2009	57534



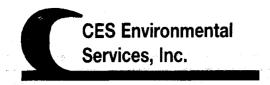
Bill To:

H&H Oil LP

20909 FM 685

Pflugerville, Texas 78660 Attn: Crystal Reininger

	Р	.O. No.	Terms	Pro	oject
			Net 30		
Quantity	Description		Manifest #	Rate	Amount
·	6/15/09				
7.75	Transportation services by CES @ \$85.00 per ho	ur		85.00	658.75
	9.5% Fuel Surcharge			62.58	62.58
4,800	Recycling of Non-RCRA oily water @ \$0.25 per (includes surcharge TOC 35040, Phenol 20) (see attached report)	gallon	BOL 87632	0.25	1,200.00
	1% Compliance Fee			19.21	19.2
e apprecia	ate your business!		Subtotal		\$1,940.54
Late Payment Policy: Any unpaid balances begining on the 30th day after the account is due will accrue a per annum interest rate of 7.5%, unless otherwise		Sales Tax (8	.25%)	\$0.00	
ated in a fo	ormalized contract.		Total		\$1,940.54



# **Inbound Load Report**

Job Number :	87632						
Type of Material:	Oily Water						
Job Date:	6/15/2009						
Bill of Lading #:	87632						
Customer:	H & H Oil, L.P.						
Gross Weight:							
Tare Weight:		OR	Total Gallons	Shipped:	4800		
Net Weight:							
Shipping In	formation						
Carrier:	CES Environmental	Services,	Inc.				
Truck Number:							
Trailer Number:	271						
CES Laborato	ory Use Only		Misc Notes:				
Specific Gravity:			pH= 6			•	
Pounds per Gallon			TOC= 35040				
Temperature:			Phenol= 20 Solids= 2%				
Total Gross Gallon % Water	<b>S:</b>		~5% Oil				
% Solids	2						
Total Net Gallons:	4800						
(minus water and so	lids)						
Sample Analyst:		·					
		ature)					
Sample Analyst:	Julius Prantil			Date:	6/15/2	2009	

# CES Environmental Services, Inc.

#27/Bill Of Lading #:

87632

Services, Inc.	
Forger ID: IN & H OII, L.P. (Pflugerville, TX) Oily Water	
Original - Shipper Provided Short Form Straigl	nt Bill of Lading – Not Negotiable – Domestic
SHIPPED FROM:	CES Profile #
H&HOII, L.P.	11a) HOU-2836
20909 FM 685	116)
Pflugerville, TX 77860	The state of the s
(800) 777-1498	
said carrier (the word carrier being understood throughout this as meaning carry to his unusual place of delivery at said destination, if on its route, other goods, it is not of itself a contract of carriage, it is mutually agreed, as to as any time interested in all or any of said property, that every service to be previously support and carrier or intermediany.	ntent and condition of packages unknown), marked, consigned, and destined as indicated below, which any person or corporation authorized to be in possession of the property under the contract) agrees to exist to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for sch carrier of all or as to any said over all or any portion of said route to destination, and as to each party enformed hereunder shall be subject to all the terms and conditions contained in the applicable contract
For payment: Charges to be blied to shipper of the "sitted to" party are set to shipper or the "Billed to" party without prior written consent of Shipper. T submitted to Shipper or the "Billed fo" party and sent to:	forth in the governing contract with Shipper. No charges other than those contained therein may be bille he extra copy of this Sill of Lading, furnished at the time of shipment, must be attached to the freight bill
CONSIGNED TO:	CARRIÉR:
CES Environmental Services, Inc.	CES Environmental Services, Inc.
4904 Griggs Rd.	4904 Griggs Rd.
Houston, TX 77021	Houston, TX 77021
forth on the face of this bill of lading. The shipper name herein is the tenderly	stration regulations at 49 CFR 390 540 implementing the intermodal Safe Container Act of 1992 is set ng party.  Description of Materials, Special Marks, and Exceptions
No 1 TT 480 G	Non-RCRA/Non-DOT Regulated Oily water
Shinner · H & H Oil L.P.	어머니는 사람이 나는 사람들이 얼마나 없다고 있다면 없다.
Shipper: H&HOILP.  Per: Y Monica Aldevensignatu	re: MONICA alduquate:
Carrier CES Environmental Services, Inc.	
Per: N. 19614 Signatu	re: 7/7/2001 Date: 6/15/09
Receiving Facility CES Environmental Se	ervices, Inc.
Per: AL GMOVIA Signatu	re: Co/15/09

white (Generator Return Copy)

Yellow (Transporter Copy)

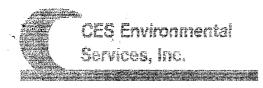
Fink (Receiving Facility Copy)

Golden Rod (Generator 1st Copy)

# **H&H Oil, L.P. - Service Order/Bill of Lading**

*A~0009228				<i>?</i> <b>A</b>	CCT#	
GENERATOR NAME & ADDRES	SS	CONT	TACT NAM	1E, PHONE & E	PA ID	The state of the
High oil LP 20009 FM 185 20104 VIV		TRAN	SPORTE	√\ R CONTACT, TR	ANG ID	P. EDA IN
H&H Oil, L.P. 20909 FM 685			ations Ma	nager—800-77		X EPA ID
Pflugerville, TX 78660			8799088	4		
RECEIVING FACILITY NAME 8	& ADDRESS	CONT	TACT NAM	IE, PHONE & E	PA ID	
					•	
			. 1		<u> </u>	*
NON HAZARDOUS RESIDUALS		SET	P/U	PRICE EACH	TOTAL	
USED OIL	<u> </u>					
USED OIL FILTERS	<u> </u>			<u></u>		
USED ANTIFREEZE						
OILY ABSORBENTS						
SPECIFICATION USED OIL						
OILY WATER			UXD			
GRIT TRAP			, 0			
YELLOW GREASE				:		
OTHER:						
SPECIAL INSTRUCTIONS:				SUBTOTAL		
	·			TAX		- 14 Se
Sniffer □ Pass □ Fail	Is the material a "Hazardous Waste" as					
Field Kit □ Pass □ Fail	defined by 40 CFR 261.3?					AMT DUE
Total Halogens □ > 1000 □ < 1000	□ Yes □ No			ILLING INFOR		g address be-
Is this facility a Conditionally Exempt Small Quantity Generator (CESQG) as defined by 40 CFR 261.5?  □ Yes □ No	Is the material regulated under TSCA 40 CFR 761? (PCBs)  □ Yes □ No					
On behalf of the Generator, I hereby certify that have been made. If the material collected is use the Generator hereby certifies that the rebuttabl including, but not limited to, proper disposal, testing the control of the control of the certifies that the rebuttable including, but not limited to, proper disposal, testing the certifies	d oil as defined by 40 CFR part 279, e presumption under 40 CFR part 2	, the Gener 79 has bee	ator certifies the rebutted. The	nat the total halogen con ne Generator will be resp	ntent is less that consible for any	an 1,000ppm, or
GENERATOR SIGNATURE / DA	WE THE THE PARTY OF THE PARTY O	DRIV	ER SIGNA	TURE / DATE		
Monico Celcle	Lt		27	1111		
Receiving Facility Signature		<b>\</b>	Stee*	Date received_		

20909 FM-685, Pflugerville, TX 78660 Phone: 512-990-1498; Fax: 512-990-1388; Toll Free: 800-777-1498



#### Transportation Work Ticket

Folder (I): H & H Oil, L.P. (Pflugerville, Oily Water	TX)	
	Manifest #:	130 %
H&HOII, L.P.	The state of the s	87632
Phone: 8007771498	Consignee :	CES Environmental Services, Inc.
Transporter:	***************************************	
Signature XMONICA a	<u>VOUW</u> Signature	
Leave CES Yard: 8:00  Arrive At Customer: 11:00	·	Desiration
Arrive At Customer: //: 30	_	
Finish Loading: 12:00		stination:
Leave Customer: 18:15	Harden Common Co	CES Yard: 3:45
Castomer PD #:	Total Hours:	
Gress Weighi :	The state of the s	Odometer : 271692
Tare Weight:		Odometer : <u>27/332</u>
fiet Weight:	Total Wil	95 :
Driver: Berry, Nosh	Tractor #: 287	
Signature : <u> </u>	Taller#:271	11.07 H .
ob Comments/Equipment :	dip to	/ @ oil fac.
er en er er som er		
. white (CES Office) Ýellow (CES Offic	pe / Billing) Pink (CES	Golden Rod (Customer)



### **JOB INFORMATION PROFILE**

				_	
	H & H Oil, L.P. Oily Water	. (Pflugerville, TX	)		
Customer :	H & H Oil, L.F	<u>)                                    </u>	D	river : Berry, Noah	
Address:	20909 FM 68	5	Н	elper :	
City,State,Zip:				Date: 6/15/2009	Time: 0600
CES Contact:				ruck# <u>287</u>	Trailer # 271
				<u> </u>	Traner ir <u></u>
Job Desci	ription:				
Contact is Ty @	512-563-5819				
i) suck out load	of oily water				
2) haul to CES					
	87632				
- contribute accessive and contributes	R INFORMATIO	N		İ	
OPERATION HOL		SHIPPING/RECEIV	ING CONTACT:	AFTER HOURS CON	ITACT:
Open :	07:00 AM	Name:	Michael White	Name:	Michael White
Close:	05:00 PM	Number:	(281) 830-4800	Number:	(281) 830-4800
	00.00 T W		(201) 000 4000		(201) 000 1000
RECEIVING	3 INFORMATIO	N			
OPERATION HOL	<u>JRS:</u>	SHIPPING/RECEIV	ING CONTACT:	AFTER HOURS CON	TACT:
Open :	06:00 AM	Name:		Name:	Joy Baker
Close:	08:00 PM	Number:	(713) 410-7789	Number:	(281) 701-8511
PURCHASE ORDE		OUIRED:	YES NO		
<u>11</u>	F YES, P.O. #:	\$\$\$ menter \$1 they are more procedy for the grant procedures accommodate control of the control	i i grama ali replamento do muzado mo escreto pelemento de plamento de plane, del 1800 como esploribado de la secuente foloscidades de la secu	The second section of the section	
PPE REQUIRED:	☐ YES 🔽	NO	HACSC REC	DUIRED: YES	NO.
IF YES, WH		it, Safety Glasses, Glov			<b>▼</b> NO
CAN CUSTOMER L		and the second s	THE Y	ES, WHAT?	
CAIT COSTOPIER E	OAD OJ.	YES NO	WAS	HOUT ANTICIPATED:	☐ YES ✓ NO
ROPPER PUMP:		☐ YES ✓ NO	вох	LINER REQUIRED	☐ YES 🗸 NO
LOADING/UNLO		REAR BELL	Y		
TRAILER TY	<u>PE:</u>	✓ DOES NOT MATT			
BOX NUMBER:					de Constantin
CES OWNS BO	Lestables de color destruter across consentations	YES NO	CUSTOMER OWNS BOX:	. The Second of	iO
CES RENTED B		☐ YES ☐ NO	CUSTOMER RENTED BO	K: YES N	10
AMOUNT OF HOSE	E NEEDED:	?	DRUM DOLLY N	IEEDED: YES	<b>✓</b> NO
	SIZE:	?	PALLET JACK N	EEDED:	NO.
			· Anna · PAGILIT	EEDED: YES	✓ NO

#### **Melba Stephens**

From:

Joy Baker

Sent:

Thursday, July 09, 2009 9:15 AM

To: Subject:

Melba Stephens RE: H&H Oil

25 cents please. THX

From: Melba Stephens <mstephens@cesenvironmental.com>

Sent: Thursday, July 09, 2009 9:00 AM

To: Joy Baker < jbaker@cesenvironmental.com>

Cc: Greg Bowman <gbowman@cesenvironmental.com>; Juanita Thomas <jthomas@cesenvironmental.com>

Subject: H&H Oil

Joy,

Need help!

Oily water load came in w/ High TOC 35040 and Phenol 20

Which means that we need to charge them @ \$0.23 per gallon per standard rate sheet.

Do you agree?

Let me know - ASAP

Melba

# CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676 Invoice

Date	Invoice #
6/4/2009	56735



Bill To:

H&H Oil LP

20909 FM 685 Pflugerville, Texas 78660

Pflugerville, Texas 78660 Attn: Crystal Reininger

		P.O. No.	Terms	Pro	oject
			Net 30		
Quantity	Description		Manifest #	Rate	Amount
	05/22/09				
12.25	Transportation services by CES @ \$85	.00 per hour		85.00	1,041.25
<b>~</b> 000	9.5% Fuel Surcharge		DOI 06492	98.92	98.92
5,000	Recycling of Non DOT regulated oil w (see inbound)	ater @ \$0.15 per gallon	BOL 86482	0.15	750.00
	05/26/09				
9.75	Transportation services by CES @ \$85	.00 per hour		85.00	828.75
<b>7</b> 000	9.5% Fuel Surcharge		DOI 07747	78.74	78.74
5,000	Recycling of Non DOT regulated oil w (see inbound)	ater @ \$0.17 per gallon	BOL 86646	0.17	850.00
	05/29/09				
11.25	Transportation services by CES @ \$85	.00 per hour		85.00	956.25
2.750	9.5% Fuel Surcharge		DOI 96665	90.85	90.85
2,750	Recycling of Non DOT regulated oil w (see inbound)	ater @ \$0.16 per gallon	BOL 86665	0.16	440.00
	1% Compliance Fee			51.35	51.35
	CES job #86482,86646,86665				
We apprecia	ate your business!		Subtotal		\$5,186.11
	nt Policy: Any unpaid balances begining on ue will accrue a per annum interest rate of 7		Sales Tax (8	.25%)	\$0.00
	ormalized contract.	, unicas outel wisc		-	ΨΟ.ΟΟ
			Total		\$5,186.11

### CES Environmental Services, Inc.

AND THE RESIDENCE OF THE PARTY	**************************************						
Original - St	hipper Provided Shor	t Form Straight	Bill of Ladi	ng - Not Negot	iable – Dome	estic	
		uga ya kanyaran miso yoo waxa waa niis iyaagoo baaba, gaaba maaqaabaa					
Folder II)	Only Water						
			er a er i de grand i de				

 SHIPPED FROM:
 CES Profile #

 Vertex Recovery - Pflugerville
 11a) HOU-2836

 20900 FM 685
 11b)

 Pflugerville , TX 78660
 11c)

 (800) 777-1498
 11c)

The property described below, in apparent good order, except as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, which exid parties (the word parties being understood throughout this as meaning any person or corporation authorized to be in possession of the property under the contract) agrees to carry to its unusual place of delivery at said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for goods; it is not of itself a contract of carriage it is mutually agreed, as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the taying and conditions contained in the applicable contract between shapper and carrier or intermediany.

For payment: Charges to be billed to Shipper or the "Billed to" party are set forth in the governing contract with Shipper. No charges other than those contained therein may be billed to Shipper or the "Billed to" party without prior written consent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight bill submitted to Shipper or the "Billed to" party and sent to:

CONSIGNED TO:

CES Environmental Services, Inc.

4904 Griggs Rd.

Houston, TX 77021

CARRIER! CES

PO Box 668

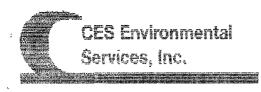
Humble , TX 77347

This is to certify that the product stated below are properly classified, described, psckaged, marked and labeled and is in proper condition for transportation according to the applicable regulations of the Department of Transportation. If this ahipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state whether it is "confler's or shipper's weight."

Intermodal Certificate. All Information required by Federal Highway Administration regulations at 49 CFR 390.540 (implementing the Intermodal Safe Container Act of 1997 is set forth on the face of this bill of ladding. The shipper name necein is the tendening party.

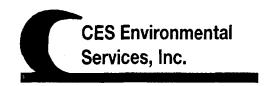
Haz	Conf	einer	Total	Unit	Description of Materials, Special Marks, and Excep	tions
	No.	Type	Quantity	Wt/Voi		
No	1	11	500	G	DOT Non regulated oil water	
ander.			ata para menangan kacamatan angan banya (ata bepada	***************************************		
er vermele				and the same of th		
	وسيوس سيندو دوس فار	on the second of		- Macana and American and American		
Per	🗸	14	Recover	5	Signature : X Dat	e: 5/29/09
Can	7	rebird	erry	<u> </u>	Signature: 87. Reux Dat	e: 5/22/09
Hac	eiving			Enviro	nmental Services, Inc.	
ħ¢.	5	Lan	Jania		Signature: Dat	B: 2 35/28
Will	te (Genera	tor Return	Сору)	Yellow	(Transporter Copy) Pink (Receiving Facility Copy) Golder	Rod (Generator 1st Copy)

EPAHO040003322



#### Transportation Work Ticket

)ate: 5/22/2009	Manifest #:	BL
Vertex Recovery - Pflugerville		
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Ticket:	85462
hone: <u>2007771498</u>	Consignee :	CES Environmental Services, Inc
ransporter: Firebird CES	The second of th	
ignature X	Signature	
Leave CES Yard: <u>5:30</u>	Arive At	Destination
Arrive At Customer : $9:30$	e e e e e e e e e e e e e e e e e e e	loading:
Begin Loading: 10:00		loading: <u>545</u>
Finish Loading :	Leave De	stination:
Leave Customer: /: @>	Ariyo At	CES Yard: 4:45
Customer PO #:	otal Hours:	CES Unload:
Gross Weight:	Ending C	Odometer: 2678)7
fare Weight:		Odometer : <u>267 442</u>
Net Weight:	Total Wil	65 :
Driver: Berry, Noah	Tractor # : 287	Tote # :
gnature : <i>D. Byyy</i>	Tailer # : 234	Box #:
Comments/Equipment :	OIP h	il on line
White (CES Office) Yellow (CES Office / I	Billing) Pink (CES	S Office / IFTA) Golden Rod (Custome



# **Inbound Load Report**

Job Number :	86482				
Type of Material:	Oily Water		· .		
Job Date:	5/22/2009				
Bill of Lading #:	86842				
Customer:	Vertex Recovery - P	flugervill	e		
Gross Weight:					
Tare Weight:	<del></del>	OR	Total Gallons Shipped	l: 5	000
Net Weight:				Ξ	
Shipping In	formation				
Carrier:	CES Environmental	Services,	Inc.		
Truck Number:					
Trailer Number:	234				
CES Laborato	ry Use Only		Misc Notes:		
Specific Gravity:			pH= 6		
Pounds per Gallon			TOC= 22440 Phenol= 25		
Temperature:			Solids= 0	120	
Total Gross Gallon	<b>5</b> 000		~60% Organic ~40%	120	
% Water			Surcharge @ \$0.15 per ga	llon	
% Solids					
Total Net Gallons:	5000				
(minus water and so	lids)				
Sample Analyst:					
		ature)			<b>-</b> ( )
Sample Analyst:	Julius Prantil		Date	<b>:</b> _	5/22/2009

Bill Of Lading #:

86646

older ID :	H & H OII, L.P.	(PROUGOTAINO,	TX)
)riginal – Sł	nipper Provide	d Short Form	n Straight Bill of Lading – Not Negotiable – Domestic
HIPPED I	ROM:		CES Profile #
erlex Rec	overy - Pflug	jerville <u> </u>	11a) HOU-2836
0900 FM	685		18 A
	, TX 78660		
800) 777-1	1498		
sid carrier (the wor arry to its unusual accis; it is not of its my time interested atween shipper and it payment. Charge	rd carrier being undersi plage of delivery at sai eff a contract of carrieg in all or any of said pro I carrier or intermedian es to be billed to Shippe	tood throughout this d destination, if on pe it is mutually ag perly, that every se y. er or the "Billed to"	i as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, is as meaning any person or copporation authorized to be in possession of the properly under the contract) agree its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt it greed, as to each carrier of all or as to any said over all or any portion of said route to destination, and as to each carrier of all or any said over all or any portion of said route to destination, and as to each carrier of all or any said over all or any portion of said route to destination, and as to each carrier of all or any portion of said route to destination, and as to each carrier of all or any portion of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination, and as to each carrier of said route to destination of the property of said route to destination of the said route to destinat
Shipper or the "Bli	ied to" party without pr or the "Ellied to" party	for written consent	of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipment, must be attached to the freight
ONSIGNE	n roʻ:		CARRIER
	. ₩	rices, Inc.	
	4 5 4 5 5 200 5 6 6 7 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6		
		A	
904 Griggs	s Rd.		4904 Griggs Rd.
904 Griggs ouston, T is is to certify that officiable regulations s"carrier's or ship ermodal Certificate	6 Rd. X 77021 the product stated belo s of the Department of per's weight."	w are properly clas Transportation. If the	4904 Griggs Rd.  Houston, TX 77021  stifled, described, packaged, marked and labeled and is in proper condition for transportation according to the its Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state with the straight of the container Act of 1992 in the intermodal Safe Contai
904 Griggs ouston, T is is to certify that officiable regulations s"carrier's or ship ermodal Certificate	S Rd.  X 77021 the product stated belo s of the Department of per's weight.  E All Information requires bill of lading. The ships of the Department of the Ships of Lading. The ships of Lading and Lading. The Ships of Lading and Lading.	ware properly class Transportation, if the red by Federal High ipper name nerein i	4904 Griggs Rd.  Houston, TX 77021  stifled, described, packaged, marked and labeled and is in proper condition for transportation according to the its Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state with the straight of the container Act of 1992 in the intermodal Safe Contai
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904 Grigg: OUSION , T is is to certify that Sicarde regulation s' carrier's or ship ermodal Certificate in on the isce of the	S Rd.  X 77021 The product stated belo so the Department of per's weight.  At information requires bill of lading. The shifter Total Quantity	ware properly class Transportation, if the ted by Federal High pper name herein i Unit Wt/Voi	4904 Griggs Rd. Houston, TX 77021 saffled, described, packaged, marked and labeled and is in proper condition for transportation according to the its 3hipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state with the state of th
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904 Griggs ouston, T is is to certify that bicsoble regulations s' carrier's or ship ermodal Certificate thron the face of the No. I	S Rd.  X 77021 the product stated beloes of the Department of per's weight.  All information regulated beloes the per's weight.  All information regulated beloes the per's weight.  Total Quantity  Type  TT Space	ware properly class transportation if the class transportation if the class transportation in the class transporta	4904 Griggs Rd. Houston , TX 77021  selfied, described, packaged, marked and labeled and is in proper condition for transpositation according to the life Shipment moves between to ports by a carrier by water, the law requires that the Bill of Lading shall state waters Administration regulations at 49 CFR 390.549 implementing the intermodal Safe Container Act of 1992 is the tendering party.  Description of Materials, Special Marks, and Exceptions  Non-RCRA/Non-DOT Regulated Oily water  Prville  Signature XMONUC AUGULO Date: 5-20-

Signature :

Yellow (Transporter Copy)

White (Generator Return Copy)

5/26/01

Golden Rou (Generator 1st Copy)

Date:_

Pink (Receiving Facility Copy)

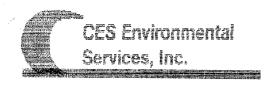
#### **H&H Oil, L.P. - Service Order/Bill of Lading**

A 0009165 ACCT# **GENERATOR NAME & ADDRESS CONTACT NAME, PHONE & EPA ID** 9 Fm/085 TRANSPORTER TRANSPORTER CONTACT, TRANS ID, & EPA ID Operations Manager—800-777-1498 H&H Oil, L.P. A85213 20909 FM 685 TXD987990884 Pflugerville, TX 78660 **CONTACT NAME, PHONE & EPA ID RECEIVING FACILITY NAME & ADDRESS** Environental NON HAZARDOUS RESIDUALS SET P/U PRICE EACH TOTAL **USED OIL USED OIL FILTERS USED ANTIFREEZE** OILY ABSORBENTS SPECIFICATION USED OIL OILY WATER **GRIT TRAP** YELLOW GREASE OTHER: SPECIAL INSTRUCTIONS: **SUBTOTAL** TAX Is the material a Sniffer □ Pass □ Fail "Hazardous Waste" as □ Pass Field Kit □ Fail defined by 40 CFR **AMT DUE** 261.3? Total Halogens □ Yes □ No **GENERATOR BILLING INFORMATION** □ > 1000 □ < 1000 Address same as above? 🗆 Yes 🗀 No If No, enter billing address be-Is the material regu-Is this facility a Conditionally Exempt Small Quantity Generator lated under TSCA 40 (CESQG) as defined by 40 CFR CFR 761? (PCBs) 261.5? ☐ Yes ☐ No ☐ Yes □ No On behalf of the Generator, I hereby certify that the information on this form is true and accurate, and no willful omissions or misrepresentations of the material have been made. If the material collected is used oil as defined by 40 CFR part 279, the Generator certifies that the total halogen content is less than 1,000ppm, or the Generator hereby certifies that the rebuttable presumption under 40 CFR part 279 has been rebutted. The Generator will be responsible for any and all costs including, but not limited to, proper disposal, testing and transportation if the material is determined to be a hazardous waste or contains PCBs. GENERATOR SIGNATURE / DATE DRIVER SIGNATURE / DATE

20909 FM-685. Pflugerville, TX 78660 Phone: 512-990-1498; Fax: 512-990-1388; Toll Free: 800-777-1498

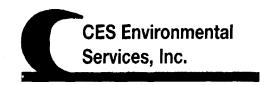
Receiving Facility Signature

Date received



#### Transportation Work Ticket

	100 100 100 100 100 100 100 100 100 100		
late :		Wanifest # :	
4 1000 1000 1000 1000 1000 1000 1000 10	Vertex Recovery - Pfluger		86646
	8007771498	A CONTRACTOR OF THE CONTRACTOR	CES Environmental Services, In
	CES Environmental S	Consignee	
ranspor			
ignatur	* Monica a	Idux Signature	
leave C	ES Vard :	Arrive At L	Destination 7.15
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	pading: 3125		
	oading: <u>4.00</u>	Leave Des	ination:
Leave C	ustomer: 4:10	Arrive At (	ES Yard:
Custom	or P() #:	Tokal Hoyas:	CES Unload:
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Net Weig	region :	Total Mile	5: 389
Diver:	Taylor, Matthew	Tractor # ; 280	Tote # :
gnature	:_Goylov	Trailer # : 270	90x#:
Commen	ots/Equipment :		
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## **Inbound Load Report**

Bill of Lading #: 86646  Customer: H & H Oil, L.P.  Gross Weight: Tare Weight: OR Total Gallons Shipped: 5000  Net Weight:  Shipping Information  Carrier: CES Environmental Services, Inc.  Truck Number: Trailer Number: 270  CES Laboratory Use Only  Specific Gravity: Pounds per Gallon: Temperature: Phenerature: Phene	Job Number :	86646						
Bill of Lading #: 86646  Customer: H & H Oil, L.P.  Gross Weight: Tare Weight: OR Total Gallons Shipped: 5000  Net Weight:  Shipping Information  Carrier: CES Environmental Services, Inc.  Truck Number: Trailer Number: 270  CES Laboratory Use Only  Misc Notes:  Specific Gravity:  Pounds per Gallon: Temperature: Phenotes Gallons: 5000 % Water % Solids 1 ~5% Oil ~94% H2O Surcharge @ \$0.17 per gallon  Total Net Gallons: 5000 (minus water and solids)  Sample Analyst:  (signature)	Type of Material:	Oily Water						
Bill of Lading #: 86646  Customer: H & H Oil, L.P.  Gross Weight: Tare Weight: OR Total Gallons Shipped: 5000  Net Weight:  Shipping Information  Carrier: CES Environmental Services, Inc.  Truck Number: Trailer Number: 270  CES Laboratory Use Only  Misc Notes:  Specific Gravity: Pounds per Gallon: Temperature: Phenomental Services, Inc.  Truck Output Misc Notes:  pH= 6     TOC= 25030     Phenol= 50     Solids= 1								
Customer: H & H Oil, L.P.  Gross Weight: Tare Weight: OR Total Gallons Shipped: 5000  Net Weight:  Shipping Information  Carrier: CES Environmental Services, Inc.  Truck Number: Trailer Number: 270  CES Laboratory Use Only  Misc Notes:  Specific Gravity: Pounds per Gallon: Total Gallons: 5000  % Water % Solids 1 % Water % Solids 5000  (minus water and solids)  Sample Analyst:  (signature)	Job Date:	5/26/2009						
Gross Weight: Tare Weight:  Shipping Information  Carrier: CES Environmental Services, Inc.  Truck Number: Trailer Number: 270  CES Laboratory Use Only Misc Notes:  Specific Gravity: Pounds per Gallon: Temperature: Total Gross Gallons: 9% Water 9% Solids Total Net Gallons: 5000 (minus water and solids)  Sample Analyst:  (signature)	Bill of Lading #:	86646						
Tare Weight:    Shipping Information	Customer:	H & H Oil, L.P.						
Shipping Information  Carrier: CES Environmental Services, Inc.  Truck Number: 270  CES Laboratory Use Only Misc Notes:  Specific Gravity: Pounds per Gallon: TOC= 25030 Phenol= 50 Solids= 1 ~5% Oil ~94% H2O % Water % Solids Total Gross Gallons: 5000 (minus water and solids)  Sample Analyst:  (signature)	Gross Weight:							
Shipping Information  Carrier: CES Environmental Services, Inc.  Truck Number:  Trailer Number: 270  CES Laboratory Use Only  Misc Notes:  Specific Gravity:  Pounds per Gallon: TOC= 25030 Phenol= 50 Solids= 1 ~5% Oil ~94% H2O % Water % Solids  Total Net Gallons: 5000 (minus water and solids)  Sample Analyst:  (signature)	Tare Weight:		OR	Total Gallons Shippe	ed:	5000	_	
Carrier: CES Environmental Services, Inc.  Truck Number: 270  CES Laboratory Use Only Misc Notes:  Specific Gravity: pH= 6	Net Weight:							
Carrier: CES Environmental Services, Inc.  Truck Number: 270  CES Laboratory Use Only Misc Notes:  Specific Gravity: pH= 6	Chionina In	formation						
Truck Number:  Trailer Number: 270  CES Laboratory Use Only  Misc Notes:  Specific Gravity:  Pounds per Gallon:  Temperature:  Total Gross Gallons:  % Water  % Solids  Total Net Gallons:  (signature)  Sample Analyst:  (signature)	Snipping in							
Trailer Number: 270  CES Laboratory Use Only  Misc Notes:  Specific Gravity:  Pounds per Gallon: Temperature:  Total Gross Gallons: % Water % Solids  Total Net Gallons: 5000 (minus water and solids)  Sample Analyst:  (signature)	Carrier:	CES Environmental S	Services,	Inc.				
CES Laboratory Use Only  Specific Gravity:  Pounds per Gallon:  Temperature:  Total Gross Gallons:  % Water  % Solids  Total Net Gallons:  (signature)  Misc Notes:								
Specific Gravity:         pH= 6           Pounds per Gallon:         TOC= 25030           Temperature:         Phenol= 50           Solids= 1         >5% Oil ~94% H2O           % Water         Surcharge @ \$0.17 per gallon           Total Net Gallons:         5000           (minus water and solids)    Sample Analyst:  (signature)	Trailer Number:	270						
Pounds per Gallon:  Temperature:  Total Gross Gallons:  % Water  % Solids  Total Net Gallons:  (minus water and solids)  pH= 6 TOC= 25030 Phenol= 50 Solids= 1 ~5% Oil ~94% H2O  Surcharge @ \$0.17 per gallon  Surcharge @ \$0.17 per gallon	CES Laborato	ory Use Only		Misc Notes:				
Pounds per Gallon:  Toc= 25030 Phenol= 50 Solids= 1 ~5% Oil ~94% H2O  % Water % Solids  Total Net Gallons: (minus water and solids)  Sample Analyst:  (signature)	Specific Gravity:							
Temperature:  Total Gross Gallons:  % Water  % Solids  Total Net Gallons:  (signature)  Phenol= 50 Solids= 1 ~5% Oil ~94% H2O Surcharge @ \$0.17 per gallon  Surcharge @ \$0.17 per gallon	Pounds per Gallon	<u> </u>						
% Water % Solids  Total Net Gallons: 5000  (minus water and solids)  Surcharge @ \$0.17 per gallon  Surcharge @ \$0.17 per gallon  (signature)	Temperature:			Phenol= 50				
% Water % Solids  Total Net Gallons: 5000 (minus water and solids)  Sample Analyst: (signature)	<b>Total Gross Gallon</b>	<b>s:</b> 5000						
Total Net Gallons: 5000  (minus water and solids)  Sample Analyst:  (signature)	% Water			7570 OII 75770 1120				
(minus water and solids)  Sample Analyst:  (signature)	% Solids			Surcharge @ \$0.17 per g	allon	า		
Sample Analyst:  (signature)	Total Net Gallons:	5000						
(signature)	(minus water and so	lids)						
(signature)								
	Sample Analyst:							
Sample Analyst: Julius Prantil Date: 5/26/2009	-	(sign	ature)					
	Sample Analyst:	Julius Prantil		Dat	te:	5/26/2009		

# **CES Environmental**

white (Generator Return Copy)

Yellow (Transporter Copy)

Bill Of Lading #:

86665

	Servic	es, inc.		
Fol		H OII, L.P. ( Water	Pflugarvil	le, TX)
On	ginal – Shippei	Provided	Short F	Form Straight Bill of Lading – Not Negotiable – Domestic
SI	IIPPED FROI	<b>4</b> ;		CES Profile #
H	& HOII, L.P.			11a) HOU-2836
20	909 FM 685			
	ugerville . TX	77860		
(8)	00) 777-1498			는 이번 경험 보이라는 <b>11g)</b> 하면 하다는 하고 함께 살을 때하는 불일 없던
said carry good arry between	earrier (the word carrier to its unusue) place of is; it is not of itself a con- time interested in sit or a een snipper and carrier symens: Onanges to be to	r being understo delivery at said tract of carriage any of said prop or Intermediary billed to Ethippe	od throughou destination, this mutual enty, that eve or the "Billie	except as noted (content and condition of packages unknown), marked, consigned, and destined as indicated below, with ut this as rewarding any person or corporation subsorted to be in possession of the property under the contract) agrees to if on its route, otherwise to deliver to another carrier on the route to said destination. This Bill of Lading is a receipt for if y agreed, as to each carrier of all or as to any said over all or any porition of said route to destination, and as to each or eny service to be performed hereunder shall be subject to all the terms and conditions contained in the applicable confine and to party are said forth in the governing contract with Shipper. No charges other than those contained therein may be bursent of Shipper. The extra copy of this Bill of Lading, furnished at the time of shipmerit, must be affected to the freight in
SUCIT	Med to Shipper or the "I	Bliled to" party i		CARRIER:
	S Environmei	T	ices in	
	04 Griggs Rd.		rishovs, ter	4904 Griggs Rd.
Ho	uston , TX 77	021		Houston TX 77021
laz	Container	Total Quantity	Unit WitVoi	Description of Materials, Special Marks, and Exceptions
	No. Type	1	<u> </u>	
Vo	TALL TALL	2756	G	Non-RCRA/Non-DOM Regulated Oily water
				가는 보고 있는 것이 되는 것이 되는 사람들이 하는 것이 되었다. 그는 생각이 되는 것같은 하는 것이 되는 것이 되었다. 그런 사람들이 가지 않는 것이 없는 것이 없는 것이 없다.
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	pper: H&H · ×Mbni		NATE	A MACHINA CAMILE
. 77 <del>-</del> 7			wital Car	Signature: <u>MNONCC GUAUC</u> Date:
	7/1	An onnier	nai oei	vices, Inc.
Per			······································	Signature : 4/1844 Date : 5/34/4
lec	eiving Facili	ty CES	Enviro	nmental Services, Inc.
Der		is per	- J	Signature: Date: 5/2/01

Pink (Receiving Facility Copy)

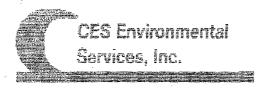
Golden Rod (Generator 1st Copy)

### H&H Oil, L.P. - Service Order/Bill of Lading

A 0009183

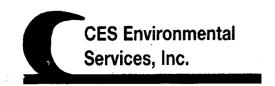
GENERATOR NAME & ADDRES	SS	CON	FACT NAM	/E, PHONE & EP	A ID
00000 Hittoil Li	)				
20909 FM 485	4-1				
DELUCERVIIL	1X	TOAA	ISPARTE	i contact to	ANCID SENTE
TRANSPORTER H&H Oil, L.P.				nager—800-77	ANS ID, & EPA ID 7-1498
20909 FM 685		A852	13	_	, 1400
Pflugerville, TX 78660		TXD9	8799088	34	
RECEIVING FACILITY NAME 8	ADDRESS	CONT	TACT NAM	ME, PHONE & EP	A ID
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hhim		}			
TUUSTOY	no tacanta atau		400000000000000000000000000000000000000		•
NON HAZARDOUS RESIDUALS		SET	P/U	PRICE EACH	TOTAL
USED OIL					
USED OIL FILTERS			<u> </u>		
USED ANTIFREEZE					
OILY ABSORBENTS					
SPECIFICATION USED OIL					
OILY WATER					
GRIT TRAP					
YELLOW GREASE	······································	<u> </u>			
OTHER:					
SPECIAL INSTRUCTIONS:		SUBTOTAL			
		<u> </u>		TAX	
Sniffer □ Pass □ Fail	Is the material a "Hazardous Waste" as				
Field Kit 🗆 Pass 🗆 Fail	defined by 40 CFR 261.3?				AMT DUE
Total Halogens	□ Yes □ No	GENE	RATOR E	TILING INFOR	MATTON
□ > 1000 □ < 1000		GENERATOR BILLING INFORMATION  Address same as above? □ Yes □ No If No, enter billing address be-			
		low.			
Is this facility a Conditionally Ex-	Is the material regu-				
empt Small Quantity Generator (CESQG) as defined by 40 CFR	lated under TSCA 40 CFR 761? (PCBs)				
261.5?	□ Yes □ No	ļ			
□ Yes □ No				<del> </del>	
On behalf of the Generator, I hereby certify that have been made. If the material collected is used	the information on this form is true	and accur	ate, and no wi	Ilful omissions or misrepr	esentations of the material
the Generator hereby certifies that the rebuttable including, but not limited to, proper disposal, tes	e presumption under 40 CFR part 27	79 has bee	n rebutted. Tl	ne Generator will be respo	onsible for any and all costs
					anis PCDS.
GENERATOR SIGNATURE / DA		DRIV	ER SIGNA	ATURE / DATE	
MYlance aldert	D	5	VZ	after	
Receiving Facility Signature				Date received_	

20909 FM-685, Pflugerville, TX 78660 Phone: 512-990-1498; Fax: 512-990-1388; Toll Free: 800-777-1498



#### Transportation Work Ticket

	: H & H Oil, L.I Oily Water	P. (Pflugerville, TX)	•		
Date	5/29/2109		Manifest # :	Bol	
		nmental Services, Inc.	Ticket: Consignee:	26665 CES Environmental S	ervices, Inc.
ivensport Signature		ce aldute	) Signatura		
Leave CE Arrive At Begin Lo Finish Lo Leave Cu	Customer **/ ading : pading :	7: SP 10: SD 1: SD 1: 15	Segin Uni Finish Un Leave De:		015
	FPS#:	Total	Hours:		nload:
Gross W Tare Wei Net Weig			<del>-</del>	dometer : 266 Odometer : 268 es :	
Smith	Berry, Noah	in the second	tor#:287	- #	***************************************
	Del Bel	UJ Trai	ler#: 270	Box#:	
	sÆquipment :	* not	ready	to load	9) H21
v/nte (C	ES Office)	Yellow (CES Office / Billing)	Pink (CES	i Office / IFTA) Golder	n Rod (Custome



## **Inbound Load Report**

Job Number :	86665					
Type of Material:	Oily Water					
Job Date:	5/29/2009					
Bill of Lading #:	86665					
<b>Customer:</b>	H & H Oil, L.P.					
Gross Weight:						
Tare Weight:		OR	<b>Total Gallons Sh</b>	ipped:	2750	
Net Weight:						
Chinning In	form of the second					
Shipping In						
Carrier:	CES Environmental	Services,	Inc.			
Truck Number:	287					
Trailer Number:	270					
CES Laborato	ory Use Only		Misc Notes:			
Specific Gravity:			Rag 12%			
Pounds per Gallon	:		Oil 5%			
Temperature:			Surcharge @ \$0.16 /	per gall	on	
<b>Total Gross Gallon</b>	<b>s:</b> 2750					
% Water	75%					
% Solids	8%					
<b>Total Net Gallons:</b>						
(minus water and so	lids)					
Sample Analyst:						
	(sign	nature)				
Sample Analyst:	Sam Brown			Date:	5/29/2009	

2 · d

Quantity: 1000 FAMAS

1

	ous Waste [®] per 40CFR 261. repiete, sign and date the Und			
Characteristic for Toxic 1			D003 (Reactive)  5 D007 D008	@000 <b>0</b>
	ed waste or mixed with one or AU, applicable codes:	-7 U Yes	s 🛭 No	
40 CFR 262.33(e) or (1)?	duct or spill cleanup that w  \[ \]  If the codes:	reuld carry a "U" or "P" wi les	aste code under	
renus State Waste Code Proper US DOT Shipping Class:		C 63 62191	v	Ahnial
Flash Point	рМ	Rescrive Sufficies	Reactive Cyanides	Solids
7140	1	O me/i	o mg/l	×
Oli & Greace	OOT Nam	Zinc (Ng/l	Copper mg/l	Mickel mg/l
ECTION 4: Physical and CON	Chemical Data APONENTS TABLE		CONCENTRATOIN	UNITS
	ists of the following materia	21	Ranges are acceptable	or%
WATER CIÙ		<del></del>	48 100	Y. Y.
Oses (SAN)	0		ಲ್ಯಕ್ತ	#

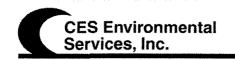
	<del>riety Related Oots</del> of this waste requires the use of special protective equipment, please explain.
North .	a) talk house (change and one or absente beautiful beaut
SECTION 6:	tached Supporting Rocyrgents
List all docum	ents, notes, data and/or analysis attached to this form as part of the waste
approval pac	uge. N+NE
····	
	incompatibilities  incompatibilities (if any):
Mare	283 W.C.
SECTION S. A	nerator's Knowledge Documentation
	lysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED
	following generator knowledge:
TCLP Metals:	<u> </u>
TCLP Volatiles	<del></del>
TCLP Semi-Vo	illes: F
Reactivity:	
Carrosivity:	
igaitability:	
SECTION 9: W	te Receipt Classification Under 40 CFR 437 IPstaining to Pro-Trentment Requirements for Controlized Waste Treatment.
facilities	
ŧ	this manerial a wastewater or wastewater studge?  11 Yes', complete this section.
,	EASE CHECK THE APPROPRIATE BOIL IT NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.
Metols Subcate	(Any: Subport A
Ŭ s	ent electropiating baths and/or studges
	tal finishing rinse water and sludges
<u> </u>	romine westes Politytiph comrol blow dawn water and sludges
	ent anotizing solutions
== :	decration wastewaters
	iste liquid mercury
	unide-containing wastes greater that 136 rag/l
==	iste acids and bases with or without metals aning, rinsing, and surface preparation solutions from electropiating or phosphating operations
	street deprine wasters
	aline and acid solutions used to closs metal parts or equipment
OHs Subcotego	: Subport #
	ed pils
	water emilsions or micrures
= -	oricents plants
	staminated groundwater cinan-up from petroleum sources
	ed petroleum products
	tpill clean-up
	p water
⊔R	se/wash waters from petroleum sources

Aug 26 08 08:53a Idealease Shop

Off-specification fuels
Underground sterage termediation waste
Tank tlean-out from petroleum or oily sources
Non-contact used glycols
Aqueous and oil mindures from parts cleaning operations
Westewater from oil bearing paint washes
Grannies Subcategory: Subport C
[] Landfill leachate
Contaminated groundwater clean-up from non-petroleum sources
Solvent-bearing wastes
Off-specification organic product
U Still bottoms
Typroduct waste glycol     Wastewater from paint washes
Wastewater from adhesives and/or epodes formulation
Westewater from organic chemical product operations
Tank clean-out from organic, non-petroleum sources
(2)
If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the pils subcategory.
(2)
If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in
excess of the values listed below, the waste should be classified in the metals subcategory.
Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L
If the waste contains all and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.    Metals Subcategory   Gib Subcategory   Organics Subcategory
SECTION 10 Additional instructions
If the transport debaseries the same replacement of freedom Daniel and found the first fir
If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Codmium, Chramium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.
SECTION 11: Generator's Certification  The information contained herein is based on   I hereby certify that the above and attached description is complete and accurate to the best of
my knowledge and ability to determine that no deliberate or willful amissions of composition
properties exist and that all known or suspected hazards have been disclosed. I curtify that the
materials tested are representative of all materials described by this document.
Authorized Signature: Date: 8-25-98
Printed Name/Title: DAVE JSANSON ASSISSE MOS.
CES USE ONLY (DO NOT WRITE IN THIS SPACE)
CES DOE OURT (NO UC) MAILE IN INIO SHACK
Compliance Officer: Yould Selfward
V
Approval Number: 411

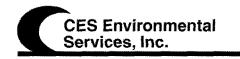
Total P.005

Total P.005



#### PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
1A P/FI.\$
Trans \$85/how + FSC
2. Contamination Limit (maximum limit before surchages apply):
Standard per Shared Orive
3. Surcharge Pricing:
Standard per Shared Drive
4. Special Testing Requirements:
Report it this is an emulsion.; ph, Toc, emulsion, phend - any oil must be decembed. It igh TOC requires heat tach treatment it wish an emulsion + will not treat in www. Surcharge tocis.
must be decanted. It igh too requires heat that treatment it it is
en smuls; in + will not spept in www. I will the comments.
5. Treatment and Handling Protocol:
Any Oil must be decarted. High toc emulsion will regarde 9 heart tank.
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



#### PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

7. Tests for Produc	t Recovered/Recy	ycled (if applicable	e):			
				··		
					<del></del>	
8. Management for	· Product Recover	red/Recycled (if a	oplicable)			
8. Management for	Product Recover	red/Recycled (if a	oplicable)			
8. Management for	Product Recover	red/Recycled (if a	oplicable)			
8. Management for	Product Recove	red/Recycled (if a	oplicable)			
8. Management for	Product Recove	red/Recycled (if a	oplicable)			
8. Management for	Product Recove	red/Recycled (if a	oplicable)			
8. Management for	Product Recove	red/Recycled (if a	oplicable)			

P.002

May be an emulsion.

## CES Environmental Services, Inc.

4904 Griggs Road, Houston, TX 77021

Phone: (713) 676-1460 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit Number: 30948

ISWR Number: 30900

U.S. EPA ID Number: TXD008950461

JB Need CES
roport points it about
North singulation
Lis Lary

							· / is	Ma
SECTION 1: Generator I		*					1	Sup o
Company: SANIC								
Address: 4300		MAS O		71	781.0			
	12460:0	State:	<u> 7x</u>	_Zlp:	78219			
	Johnson		_Title:	MANA				
Phone Number:	210 355	8904	_ Fax Number:	210	477 25	70		
24/hr Phone Number:	310 322	8904	_					
US EPA ID No:	TECESOS							
State ID No:	CESOG		_SIC Code:	N				
SECTION 2: Billing Infor		ne as Above						
Company: H & L-1 Address: 20909	FM 415							
		State:	-t &	Zip:	78660			
City: <u>041euse</u> Contact: Kaluin		J. J. J. C.	Title:	- KIP.	1114			
Phone Number:	800 777 14	95	Fax Number:					
Filotic Hottiber.	100 111 14							
SECTION 3: General Des	cription of the Waste	<u>!</u>						
		•						
Name of Waste:	Oily WAS	<b>e~</b>						
Name of Waste: Detailed Description of I	Process Generating W	aste:					<del></del>	
oily wate	r from C	Daily cop	teritary.	ازه	fram n	<u> </u>	<u>,, , ,                               </u>	e iDueul
	'Liquid	Sludge	_	Powder			, ,	
	Solid	Filter Cake		Combinatio	าก			
					_			
Color:	rK		Odor:	H	dro cmi	19.2		
				,				
Specific Gravity (water=1	L):	<u> </u>	•	Density:	8.34 lbs/	gal		
Does this material conta	in any total phenolic	compounds?	☐ Yes	<u> </u>	No.			
	• •	·						
Does this material contain	in any para substitut	ed phenolic comp	ounds?	□ Y	es 🗀 No			
Is the Waste subject to t	he benzene waste op	eration NESHAP?	(40 CFR Part 6	1, Subpart F	F) 🗆	Yes 🖃	No	
Answer "Yes" if your was	te contains benzene A	ND if the SIC cod	e from your fac	ility is one o	f the following:		•	
2812 2813	2816	2819 2821	2822	2823	2824	2833	2834	
2835 2836	2841	2842 2843	2844	2851	2861	2865	2869	
2873 2874	2876	2879 2891	2892	2893	2896	2899	2911	
3312 4953	4959	9511						
Layers: 🗌 Sing	le-phase	Multi-phase						
Container Type:	Drum 🔲 Tote	Truck [	Other (explain	)				
Frequency:	☐ Monthly ☑ Ye	early 🗍 One-Ti	me					

If "Yes", then please con If "Yes", Is it:	_	erlying Haza  D002 (Cor D005 D011	rosive) 🔲 5 🗍 DOO6	ots Form atta		€0000	
	ed waste or mixed with one st ALL applicable codes:		☐ Yes	8	No		
40 CFR 261.33(e) or (f)?	duct or spill cleanup that w \(\begin{align*} \text{ Y} \text{ st ALL applicable codes:} align*	'es 🖃			der	<del></del>	
Texas State Waste Code		•	Q2191				
Proper US DOT Shipping Class:	Name: No.3 R	PG:	100 400 An_	RQ:	Me N	Aterial	
Flash Point	ρН	Donat.					
	1 10.0	Keacti	ve Sulfides	Reactive	Cyanides	Soli	ds
	7	Keacti		Reactive	Cyanides mg/l	5oli	ds %
7149 Oil & Grease	7 Toc	<del></del>		0		Soli Nici	%
7140	7	<del></del>	<u>mr/l</u>	0	mg/l		%
Oil & Grease    mg/l	7 TOC <u>mg/l</u>	0	mg/l Zinc	CONCENT	mg/l pper mg/l RATOIN acceptable		%  (e)  mg/l  UNITS  or %
Oll & Grease  Oll & Grease  mg/l  SECTION 4: Physical and  COM  The waste cons  WAT FR	TOC  TOC  mg/l  Chemical Data  MPONENTS TABLE  ists of the following materia	0	mg/l Zinc	CONCENT	mg/l pper mg/l RATOIN icceptable - 100		%  (e)  mg/l  UNITS  or%  Y
Oll & Grease  Oll & Grease  mg/!  SECTION 4: Physical and COM The waste cons WATER	TOC  TOC  mg/l  Chemical Data  MPONENTS TABLE  ists of the following materia	0	mg/l Zinc	CONCENT	mg/l pper mg/l RATOIN icceptable - 100		%  (e)  mg/l  UNITS  or %

	fety Related Data
If the handling	of this waste requires the use of special protective equipment, please explain.
NONE	
CECTION C. AM	tached Supporting Documents
	nts, notes, data and/or analysis attached to this form as part of the waste
approval packa	
app. ova. poena	
SECTION 7: Inc	
	ncompatibilities (if any);
Name K	M O W A
COTTON D. Co.	nanchariu Macuiladaa Danaaraadaa
	nerator's Knowledge Documentation ysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED
•	following generator knowledge:
basea apon me	LONG ALLES FOLD WAS AREA P.T.
TCLP Metals:	x
TCLP Volatiles:	Y
TCLP Semi-Volat	
Reactivity:	<u> </u>
Corrosivity:	
Ignitability:	Ψ
	te Receipt Classification Under 40 CFR 437 (Programment Regulrements for Controlized Waste Treatment
<u>Facilities)</u> Is th	nis material a wastewater or wastewater sludge? YES 10
	If Yes', complete this section.
a. e	TACE CLICAL THE ADDRESS OF DOMEST DAY. IF NO ADDRESS OF CATEGORY OF TO THE MENT OF CE
PLE	ASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.
Metals Subcatego	<u>ory</u> : Subpart A
	nt electroplating baths and/or sludges
	tal finishing rinse water and sludges omate wastes
<b>⊢</b> ≕′ '	pollution control blow down water and sludges
	nt anodizing solutions
	neration wastewaters
	ste liquid mercury nide-containing wastes greater than 136 mg/l
	ste acids and bases with or without metals
🔲 Clea	ning, rinsing, and surface preparation solutions from electroplating or phosphating operations
==	ratory deburring wastewater
[_] Alka	line and acid solutions used to clean metal parts or equipment
Oils Subcategory	: Subport B
Use	d ails
	water emulsions or mixtures
	ricants lants
	iants taminated groundwater clean-up from petroleum sources
	d petroleum products
Oil s	pHI clean-up
	e water re/wash waters from petroleum sources
(A) Kins	el mater a uniti herrolenti pontes

☐ Interceptor wastes
Off-specification fuels
Underground storage remediation waste
Tank clean-out from petroleum or oily sources
Non-contact used glycols
Aqueous and oil mixtures from parts cleaning operations
Organies Subcategory: Subpart C
☐ Landfill leachate
Contaminated groundwater clean-up from non-petroleum sources
Solvent-bearing wastes
Off-specification organic product
Still bottoms
U Byproduct waste glycol
Wastewater from paint washes
Wastewater from adhesives and/or epoxies formulation
Wastewater from organic chemical product operations
☐ Tank clean-out from organic, non-petroleum sources
(1)
If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.
,
(2)
If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in
excess of the values listed below, the waste should be classified in the metals subcategory.
Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L
Maket 3/2 fills t
(3)
If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper,
or nickel above any of the values listed above, the waste should be classified in the organics subcategory.
Metals Subcategory
☐ Oilt Subcategory ☐ Organics Subcategory
UP Organics Subcategory
SECTION 10 Additional Instructions
SECTION AN AUDICIONAL MISTOCHOUS
If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium,
Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This
will be prior to acceptance. The generator will be responsible for the cost of the analysis.
SECTION 11: Generator's Certification
The information contained herein is based on generator knowledge and/or analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of
my knowledge and ability to determine that no deliberate or willful omissions of composition
properties exist and that all known or suspected hazards have been disclosed. I certify that the
materials tested are representative of all materials described by this document.
235.08
Authorized Signature: Date: 125-28
Printed Name/Title: DAVE JSMNSON ASABOR MOD.
CES USE ONLY (DO NOT WRITE IN THIS SPACE)
Compliance Officer: Webbul Hy Ale
Date: 12-5-08 Approved Rejected
12 <del></del>
Approval Number:

Total P.005



#### PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

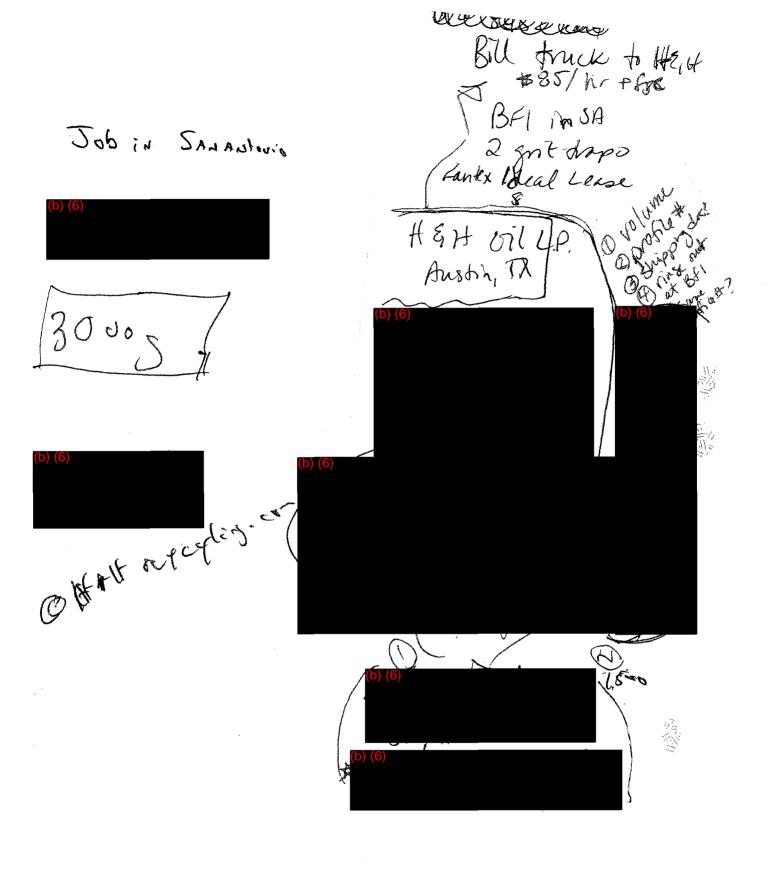
1. Base Pricing (including freight):
\$0.15/gal + trans +f5<
2. Contamination Limit (maximum limit before surchages apply):
Sta ( < 3% 50lids)
3. Surcharge Pricing:
Sta per rate sheet.
4. Special Testing Requirements:
phenol, % oil, %, solids. Emulsion Yos or No.
5. Treatment and Handling Protocol:
WN, emulsion will process to heat tank for to break emulsion + squarate oil.
6. Treated Wastewater Discharge Subcategory:

☐ Subcategory A Subcategory B ☐ Subcategory C



#### PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

7. Tests for Product Recovered/Recycled (if applicable):						
8. Management for Product Rec	covered/Recycled (if a	pplicable)				



20

1116912

BET/TESSMAN RD LANDFILL 2000 TH TO EAST SAN PATONIO, TEXAS 2310-661-4104 239161 SANTEX

1380 ACKERMAN RO. ドの軽まプププミク SAN ANTONIO, TX 78219 Contract: ML60Y16487

00 Gross Weight 49,200.00 lb Stored Tare Weight 30,960.00 it Net Weight 18,240,00 lb

048489 YB TICKET G\$00049 GERALD S WEIGHMASTER 23 June 2008 11:12 am DATE IN TIME IN 23 June 2008 12:15 pm DATE OUT TIME OUT L.XG2 VEHICLE ROLL OFF 0557710/0557709 REFERENCE ORIGIN <del>Inbound - SCALE TICKET</del>

9.12 TN

9. 12 IN EA FEE-WEIGH-ONLY

COTY 17"	CONIT	701	CLILLISULLILITIES TO THE CHARGE PROPERTY OF THE PROPERTY OF TH	RATE	EXTENSION	TAX	TOTAL
1	(L.I (VO	(:)	ENVIRONMENTAL, FEE				
	od Lo	31.	FUEL RECOVERY FEE				•
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· • •					į		
*						1.	
		1	·			1	
,							
		- 1		•			
1	.			•			\$

**SAFETY MEMOS:** 

- · Hard hats MUST be worn.
- · High Visibility vests MUST be worn.
- · Passengers MUST remain in vehicle at all times. SIGNATURE.

TENDERED CHANGE CHECK NO.

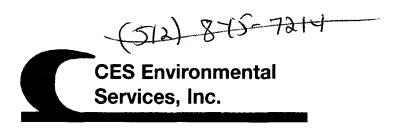


Au	g 20 08 09:07a Idealease Sho	210477	2570		P.2	
	NON-HAZA	ALLIED WASTE MANIFES	т [ ]	0557	710	
	Generator's US EPA ID Number     Manifest Document Number	er 2. Page 1 of				
	3. Generator's Name and Mailing Address  San tex international File trucks  1380 Ackerman Rd  San Antonio, TX  4. Phone ( )	5. Generating Location (if diff Square) 6. Phone ( )	ferent)	•		
	7. Transporter #1 Company Name FCC en Vironmental (Siemens)	8. US EPA ID Number	9. Transporter #1*			
	10. Transporter #2 Company Name	11. US EPA ID Number	12. Transporter #	2's Phone		
	13. Designated T/S/D Facility Name and Site Address  A/1; ed Wolfe  7000 - T/7 (0 6)	14. US EPA ID Number		15. Facility's Phone  210 66/ 7558		
	59n 4nhnio, TX 78219  16. Waste Shipping Name and Description					
	6. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date $Lboylbuy 487$	18. Containers  No. Type	19, Total Quantity	20. Unit Wt/Vol	
TOR	a.		17	762	CAI	
GENERATO	b.			. «		
	C		<u>a</u> , o a	Liberture,		
	d.					
LITY TRANSPORTER 5	21. Additional Descriptions for Materials Listed Above					
	22. Special Handling Instructions and Additional Information					
	23. GENERATOR'S CERTIFICATION: I certify the materials described on t	this manifest are not subject to federal regulations for	reporting proper dispos	al of Hazardous Was	le.	
,	Printed/Typed Name CL, FF GROUMANY	Signatur Maurur	~~ <u> </u>	Mo	6 23 63°	
ER	24. Transporter #1: Acknowledgement of Receipt of Materials	ls: all				
PORTER	Printed/Typed Name Cerardo Marbinez	Signative Signature	1/	0	62308	
TRANS	25. Transporter #2: Acknowledgement of Receipt of Materials Printed/Typed Name	Signature		, Mc	nth Day Year	
TR	26. Discrepancy Indication Space	•	·			
LITY	zo. Discrepancy mulication Space			<u>.</u>		
FACI	27. Facility Owner or Operator: Certification of receipt of waste mate	erials covered by this manifest (except as note	d in Item 19)			
T/S/D	Printed/Typed Name Valer I'C Loper	Signature La	29_	Mo	oth Day Year	
To the same					770716	



F	lei	se print of type:	RDOUS	WASTE MANIFEST			05577	09
.[		Generator's US EPA ID Number     Manifest Document Number	2. Page 1 of					
	۲	3. Generalor's Name and Mailing Address  Sontax Tabalcase  4300 HWY 90E,  Son Antonio, TX		5. Generating Location (if diffe	rent)			
		4. Phone ( ) 7. Transporter #1 Company Name	8. US EPA I	6. Phone ( )  D Number	9. Trans	aporter #1's	Phone	· 
	ı	Fice environmatel (siemens)					5-243	<b>2</b>
		10. Transporter #2 Company Name	11. US EPA	ID Number	12. Tran	nsporter #2	's Phone	
		13. Designated T/S/D Facility Name and Site Address  A//, ed Laste  7000 IH 10 C.	14. US EPA	ID Number	l	lity's Phon	·   /- 75.	58
	ŀ	San 4 Ahnie, Th 16. Waste Shipping Name and Description	17 Allied Was	ste Approval # and Exp. Date	18. Cont		19. Total	20. Unit
	ı	Corit Mud	1 .	416487	No.	Туре	Quantity	WtVol
ATOB -	- 1	a.			1	T	1387	641
GENERA	<b>: </b>	b. •				-	•	
			المنافع	SEASON COMP. LE FA		e ara c		
		1.						
		21. Additional Descriptions for Materials Listed Above				•		
	2	2. Special Handling Instructions and Additional Information						
	2	3. GENERATOR'S CERTIFICATION: I certify the materials described on thi			eporting pro	oper disposa	l of Hazardous Wast	
		rinted/Typed Name JUSTAN STUART	Signature	The Shall	>		Mai	nth Day Year
TER	_	4. Transporter #1: Acknowledgement of Receipt of Materials rinted/Typed Name /	Signature		7)		_ Mor	nth Day Year
POR	4	Sergrato Martine Z  5. Transporter #2: Acknowledgement of Receipt of Materials	1 2	enough Moth			$\mathcal{D}_{l}$	62308
TRANSPORT	F	rinted/Typed Name	Signature				Mor	nih Day Year
	2	6. Discrepancy Indication Space			··········		<u></u>	
ID FACILITY	2	7. Facility Owner or Operator: Certification of receipt of waste material	als covered by	this manifest (except as noted	in Item 1	9)		
T/S/D	P	rinted/Typed Name GBRAU) SMITY	Signature	al June	James and State of the State of		[6	Day Year 28
		ORIGINAL	- RETURN	TO GENERATOR				જાંદિયા હાલ્યા

Barring to longex



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 748-8664

## Fax

To:	Dave Johnson	From:	A1	Longori	ia

Fax: (210)477-2570 Pages: 5

Date: 8/25/08

	Please rev		ttached d	ocument.	After rev	riewing
picase	sign and it	zuiii.				
						•
						<del></del>
		<del> </del>			-	
	<u> </u>	<del></del>				
					J	
	·	····				<u> </u>
					<u> </u>	



JB

4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676

http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948

U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

	Generator I														
Company:	SANTE	<u> ۲۵</u>	ed lead	اد											
Address:	4300	Highe	1A1	90	FAIA										
City:	<u> </u>	ingth 1	0		State:	マア		_Zip:	78.	719					
Contact:	DAVE	tudo T	<b>N</b>		<del></del>	Title:		MAN	~22A						
Phone Num	ber:	210	355		104	_ Fax Num	ber:	210	<b>~</b> 47	<u>າ                                    </u>	257	0			
24/hr Phon	e Number:	<u> 310</u>	3 55	- 89	401	_									
US EPA ID N	lo:	TXC	ESQ	<u> </u>											
State ID No	:	CES	<u> </u>			_SIC Code:	;	_~1/	<u> </u>						
CECTION 3.	Dilling Info			C											
	Billing Infor				s Above										
	3000	F~	· 68	5	C1 - 1 - :			<b></b>							
	Pfleuge				State:	~C 4C		_Zip:	78	C C C	3				
Contact:	<u>Kerosu</u>					_ Title:	L								
Phone Num	per:	800	711	1498		_ Fax Numl	ber:								
SECTION 3:	General Des	scription o	of the Wa	ste											
Name of Wa	aste:	Oily	لما	vs ta											
Detailed De					);										
	•		`	•											
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Specific dra	vity (water	<b>.</b> , .	-			_		Delisity.	0.0	<u> </u>	us/gai				
Does this ma	aterial conta	in any tot	al pheno	lic com	pounds?		Yes		No						
			-												
Does this ma	aterial conta	in any pa	ra substii	tuted pl	henolic com	pounds?			Yes		Νo				
											_				
Is the Waste	-			-		-		-			_	es		No	
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2812	2813		2816	281	9 2821	L 2	2822	2823	3	2824	2	2833		2834	
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Quantity:	100	(4.7	2411		_										

If "Yes", then please co	ous Waste" per 40CFR 261. mplete, sign and date the Unc	derlying Hazardous Constitue	<b>□</b>	
Characteristic for Toxic	- ` <b>`</b>		- <u>-</u>	□ D009
	D010		,	
Characteristic for Toxic	Organics: D012 thru D043 (	(please list all that apply)		
	ed waste or mixed with one ist ALL applicable codes:	e?	S ☑ No	
40 CFR 261.33(e) or (f)?	duct or spill cleanup that w	vould carry a "U" or "P" wa Yes	aste code under	
Texas State Waste Code Proper US DOT Shipping Class:		Recycle  Reck Non Dot  PG: NA	RO: NO	Ateria)
Flash Point	рН	Reactive Sulfides	Reactive Cyanides	Solids
7140	7	<b>O</b> mg/l	<b>o</b> mg/l	%
Oil & Grease	TOC	Zinc	Copper	Nickel
mg/l	mg/l	mg/l	mg/l	mg/l
SECTION 4: Physical and	l Chemical Data			
	MPONENTS TABLE		CONCENTRATOIN	UNITS
	sists of the following materi	als	Ranges are acceptable	or %
WATER			95-100	Y.
<u> </u>				%
Dir4/SAN	<u>U</u>		<u> </u>	4/4

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
WATER	95-100	8.
011	0-1	%
Dira/SAND	೦೯,5	4/4

	Sarety Relat					
	ing of this wa	aste requires the u	se of special protecti	ve equipment, please	explain.	
None						
CECTION C	A 4 4     C					
		pporting Docume				
			ysis attached to this	form as part of the wa	ste	
approval pa	ckage.	HONE				
SECTION 7:	Incompatibi	ilitiae				
		bilities (if any):				
Nane						
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SECTION 8:	Generator's	Knowledge Docu	nentation			
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		g generator knowl				
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TCLP Metals	:	×				
TCLP Volatile		~		·		
TCLP Semi-V		<del>/e</del>				
Reactivity:	olutiles.	7				
Corrosivity:		<u>'</u>				
Ignitability:		<u>.</u>				
igilitability.		7		~		
SECTION O. V	Vasta Bassint	Classification Linds	r 40 CEP 427 / Presining	to Dra Trantmant Page	uiramants fa	r Centralized Waste Treatment
Facilities)	vaste keceipt	Classification onde	1 40 CFR 437 (F1 Calling	to Fre-Treatment Neg	un ements 10	Centralized Waste Heatment
racincies	Is this materia	al a wastewater or	vastewater sludge?		YES	-NO
		complete this sectio	_			<b>_</b>
	PLEASE CHEC	K THE APPROPRIAT	E BOX. IF NO APPROPI	RIATE CATEGORY, GO TO	O THE NEXT	PAGE.
Metals Subca	teanry : Subr	nart A				
		plating baths and/o	r sludges			
		ng rinse water and s				
	Chromate wa	istes				
	Air pollution	control blow down	water and sludges			
닏	Spent anodizi	-				
	Incineration v					
=	Waste liquid	•				
		aining wastes great and bases with or w				
_				n electroplating or phos	nhating one	rations
==	O,	ourring wastewater	paration solutions no	in electroplating or phos	philating ope	rations
			o clean metal parts or	equipment		•
			,			
Oils Subcateg	<u>ory</u> : Subpart	t B				
	Used oils					
=		ulsions or mixtures				
=	Lubricants					
	Contaminate	d groundwater elec	-un from notroloum o	nurcas		
	Used petrolei	-	n-up from petroleum se	Juices		
	Oil spill clean-	•				
	Bilge water	ne.				
		vaters from petrole	im cources			

	Interceptor wastes Off-specification fuels Underground storage remediation waste Tank clean-out from petroleum or oily sources Non-contact used glycols Aqueous and oil mixtures from parts cleaning operations
	Wastewater from oil bearing paint washes
	Category: Subpart C Landfill leachate Contaminated groundwater clean-up from non-petroleum sources Solvent-bearing wastes Off-specification organic product Still bottoms Byproduct waste glycol Wastewater from paint washes Wastewater from adhesives and/or epoxies formulation Wastewater from organic chemical product operations Tank clean-out from organic, non-petroleum sources
(1)	If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.
	If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.  Cadmium: 0.2 mg/L  Chromium: 8.9 mg/L  Copper: 4.9 mg/L  Nickel: 37.5 mg/L
	If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.  Metals Subcategory  Oils Subcategory Organics Subcategory
SECTION 10 A	additional Instructions
Copper, Nicke	determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, el, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This acceptance. The generator will be responsible for the cost of the analysis.
The informat I hereby cert my knowledg properties ex	Generator's Certification  cion contained herein is based on generator knowledge and/or analytical data.  ify that the above and attached description is complete and accurate to the best of ge and ability to determine that no deliberate or willful omissions of compostion wist and that all known or suspected hazards have been disclosed. I certify that the sted are representative of all materials described by this document.
Authorized S	ignature: Date:
Printed Nam	e/Title:
CES USE ONL	Y (DO NOT WRITE IN THIS SPACE)
Compliance ( Date: Approval Nu	Approved Rejected

## BOX #_ 4/

TYPE OF DOCUMENTS:	_
DOCUMENTS OF INTEREST:  PACES  Produce NaSH at Est: worte  Preapproval lutions of suppliers of s	products for
- Joey Sure fatality report in 3 ming binder our mal affectarists of metricoses including	. Conformy Matt Bounon
- Drivers logs.	1

VIOLATIONS SUPPORTED: DOT RCRA SDWA **OSHA** 

BOX SEARECH BY: Whiff

DATE SEARCHED: 8/26/09

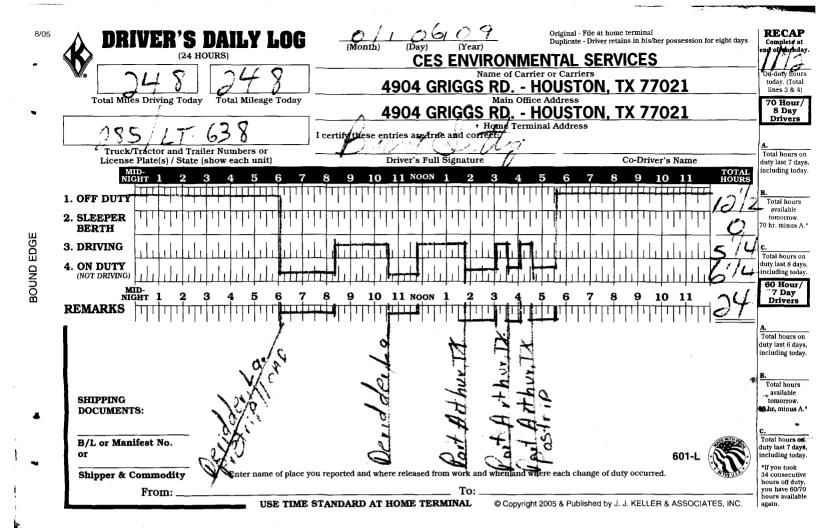
Prabhaker

Brient's driver log books



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1	MINIARY STEE!  MON 1H:  Age of 70 hours in 8 days, use the summary sheet on the left; if you operate	summary sheet on the right. calendar days, and entries should be ed, enter zero (0) in first column and co	Wor Col ton	er the no last se ces und first spa ked du umn A f orrow -	ven da er the ace und ring th rom 70 in Colu	tys of column der Co e last hours mn B.	the plant in the all t	orece ded "I A the ys. S enter	ding indurs Tota ubtra this fi	month Worke of th ct the gure -	in the ed Tod e num figure hours	) for e first lay". I ber o e ent avail	each t seve Enter of hou ered able t	of en in irs in for	in ( sho and <b>34</b> -	the d al the Colum ould h I shou hour e 70	ays of numerous of	ber of If an been circl art: I	inth in if hou iy nuit done ed for if you ilable estart	rs wo mber e. Any r easy took agai	orked in Co y driv y ider c 34 o in. Yo	during that the constant of th	ng the n C e nat wat tion. ecutivuld the	last xceedas do as do e hou	8 day ds 70 one is urs o egin	ysan ), no sa vi offdu your f	d ento drivir iolatio ty, yo totalir	er ng on ou	sum six (	nmary days h <b>our</b> re 60 dling o	r she for la <b>rest</b> a houl	ame et fo ist se art: if rs av	instr r 8 d ven d you ailab	uctio ays - tays a took a le ag	ns p 70 and 6 34 co jain.	hours 0 hou nsecu You	ed for s, exc irs for utive l would	or cor cept si r 70 he hours d ther back t	ubstitu ours. off du obeg	ute la uty, yo in yo	st ou ur
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4	DAILY LOG	(1101111) (211)	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days	REC. Complete
<b>W</b> / ₈		4904 GRIGGS RD	Carrier or Carriers HOUSTON, TX 77021	On-duty I today. (1 lines 3
Total Miles Driving Tod	ay Total Mileage Today	4904 GRIGGS RD	n Office Address HOUSTON, TX 77021 Temmal Address	70 Ho 8 Da Drive
Truck/Tractor and Trucks/Tractor		I certify these entries are true and correct:  Driver's Full Signature	Co-Driver's Name	A. Total hou
MID- NIGHT 1 2	3 4 5 6 7	8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 TOTAL HOURS	including
1. OFF DUTY 2. SLEEPER BERTH	<del>╃╩╏╧╏╵╏</del> ╌╏┸╏┸╏┷╏┷┩┸╋ ┇┇╏┇┇			Total he availat tomorr 70 hr. min
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4. ON DUTY (NOT DRIVING)		<u>.                                    </u>		duty last including
REMARKS   1 2	3 4 5 6 7	8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11	7 Do Drive
SHIPPING DOCUMENTS:				B. Total ho availat tomorn 60 hr. min
B/L or Manifest No. or			601-L	Total hou duty last 7 including
Shipper & Commodity From:		you reported and where released from work and when  To:  STANDARD AT HOME TERMINAL  © Co	and where each change of duty occurred.  Opyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	34 consect hours off you have hours availagain.

/05

To:

work and when and where each change of duty occurred.

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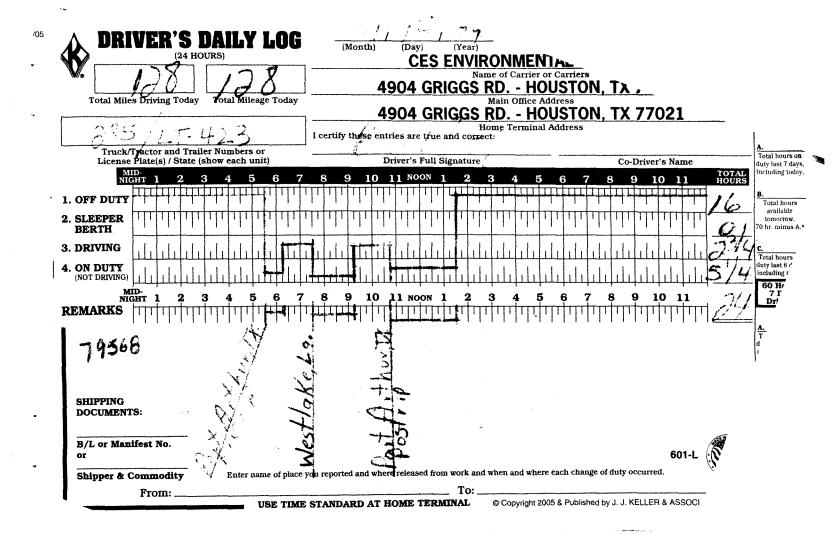
Enter name of place you reported and who

USE TIME STANDARD AT HOME TERMINAL

Shipper & Commodity

From:

*If you took 34 consecutive hours off duty, you have 60/70 hours available again.



orted and where feleased from work and when and where each change of duty occurred.

(0.5

B/L or Manifest No.

Shipper & Commodity

From:

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USE TIME STANDARD AT HOME TERMINAL

C. Total hours on duty last 7 days, including today.

*If you took 34 consecutive hours off duty, you have 60/70 hours available again.

601-L

From:

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again.

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### Instructions for Completing the Driver's Daily Log (§395.8)

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As a driver, you are required to fill out a daily log (duty status record) for each 24-hour period. You must have a log for every day, including days off.

All information must be true and correct. You must make all of your own entries (except for preprinted items). If you make any incomplete or false entries, both you and/or your carrier are liable to prosecution.

#### Information Required on the Form

You must provide the following information on the form:

Date. You must write down the month, day, and year for the beginning of each 24-hour period.

** Total miles driving today. You must record the total number of miles you drove during the 24-hour period.

**Truck or tractor and trailer numbers.** You must write down either the vehicle number(s) assigned by your company, or the license number and licensing state for each commercial motor vehicle operated during the 24-hour period.

Name of carrier. You must write down the name of the motor carrier(s) you are working for. If you are working for more than one carrier in a 24-hour period, you must list the times you started and finished work for each carrier.

Triver's signature/certification. You must certify that all of your entries are true and correct by signing your log with your legal name or name of record.

Time base to be used. You must use the time standard in effect at your home terminal, and also the 24-hour period starting time designated for your home terminal.

Main office address. Your carrier's main office address must be on the record of duty status.

Remarks. This is the area where you must list the city, town, or village, and state abbreviation when a change of duty status occurs.

Name of co-driver. Write the name of your co-driver, if you have one.

**Total hours.** You must add and record the total hours for each duty status at the right of the grid. The total of the entries must equal 24 hours.

Shipping document number(s), or name of shipper and commodity.

The grid portion of your log must be kept current to the time shown for the last change f duty status. You must record your duty status on the grid as follows:

- Off Duty
- · Sleeper Berth
- Driving
- On Duty (Not Driving)

Off Duty. Except for time resting in a sleeper berth, you must draw a continuous line between the appropriate time markers to show the periods of time when you are not on duty, not required to be in readiness to work, or not under any responsibility for performing work.

**Sleeper Berth.** You must draw a continuous line between the appropriate time markers to show the periods of time when you are off duty, resting in a sleeper berth.

**Driving.** You must draw a continuous line between the appropriate time markers to show the periods of time when you are at the driving controls of a commercial motor vehicle in operation.

On Duty (Not Driving). You must draw a continuous line between the appropriate time markers to show the periods of time when you are on duty, but not driving.

For each change of duty status, the name of the city, town, or village, with state abbreviation, must be recorded in the Remarks section. If the change of duty status occurs at a location other than a city, town, or village, you must show one of the following:

- The highway number and the nearest milepost followed by the name of the nearest city, town, or village and state abbreviation,
- The highway number and the name of the service plaza followed by the name of the nearest city, town, or village and state abbreviation, or
- The highway numbers of the two nearest intersecting roadways followed by the name of the nearest city, town, or village, and state abbreviation.

#### A Few Additional Notes

After you have completed your log, the regulations allow you 13 days to forward the original copy to your employer. Your employer may require you to turn it in sooner.

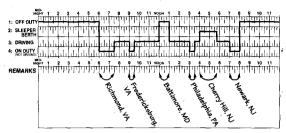
You must keep a copy of your completed log for the next 7 consecutive days. The copies must be available for inspection by law enforcement at any time while you are on duty

If you work for more than one motor carrier during a 24-hour period, you must submit a copy of your record of duty status to each motor carrier. The record must include:

- All duty time for the entire 24-hour period.
- . The name of each motor carrier you worked for during the 24-hour period, and
- The beginning and finishing time, including a.m. or p.m.; worked for each motor carrier.

## Sample Completed Grid

The following grid illustrates how a driver's duty status should be recorded for a trip from Richmond, Virginia, to Newark, New Jersey. The grid reflects the midnight-to-midnight 24-hour period.



# Graph Grid (midnight to midnight operation)

The driver in this instance reported for duty at the motor carrier's terminal. The driver reported for work at 6 a.m., helped load, checked with dispatch, made a pretrip inspection, and performed other duties until 7:30 a.m. when the driver began driving. At 9 a.m. the driver had a minor accident in Fredericksburg, Virginia, and spent one half hour handling details with the local police. The driver arrived at the company's Baltimore, Maryland, terminal at noon and went to lunch while minor repairs were made to the tractor. At 1 p.m. the driver resumed the trip and made a delivery in Philadelphia, Pennsylvania,

between 3 p.m. and 3:30 p.m. at which time the driver started driving again. Upon arrival at Cherry Hill, New Jersey, at 4 p.m., the driver entered the sleeper berth for a rest break until 5:45 p.m. at which time the driver resumed driving again. At 7 p.m. the driver arrived at the company's terminal in Newark, New Jersey. Between 7 p.m. and 8 p.m. the driver prepared the required paperwork including completing the driver's record of duty status, driver vehicle inspection report, insurance report for the Fredericksburg, Virginia accident, checked for the next day's dispatch, etc. At 8 p.m., the driver went off duty.



# Main Points of 2005 Hours of Service Regulations (Property-Carrying Vehicles)

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- . Off-duty time: 10 consecutive hours.
- On-duty time: 14 consecutive hours after coming on duty.
- Driving time: 11 hours.
- Weekly limits: 60 hours/7 days or 70 hours/8 days (no change).
- 34-hour restart: The 60/70-hour clock may restart after 34 consecutive hours off duty.
- Split sleeper berth: One period of at least 8 (but less than 10) consecutive hours in the sleeper berth; and a separate period, before or after the 8-hour period, of at least 2 (but less than 10) consecutive hours. The 2-consecutive hour period may be in the sleeper berth, off duty, or any combination of the two. The 8-hour period will not be counted as part of the 14 hours, but the 2-hour period will be counted as part of the 14 hours. Following the security and the 11-

hour and 14-hour rules must be re-calculated from the end of the first of the two periods.

- Short-haul 16-hour exception: The 14-hour on-duty period can be extended to 16 hours if driver has been released from duty at the normal work reporting location for the previous 5 duty tours, is released from duty at the normal work reporting location within 16 hours, and has not used exception in the previous 6 days (except following a 34-hour restart 7/8-day period).
- Compliance Date: October 1, 2005

J. J. Keller 3003 W. Breezewood Lane, P.O. Box 368
Neenah, WI \$4957-0368

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**OFFICIAL DELUXE COPY** 

PRESCRIBED BY FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION **U.S. DEPARTMENT OF TRANSPORTATION** 



MONTH: YEAR: _ CARRIER:

**DRIVER:** 

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Rev. 7/06

# MONTHLY SUMMARY SHEET

MONTH:

If you operate on the period of 70 hours in 8 days, use the summary sheet on the left; if you operate on the period of 60 hours in 7 days, use the summary sheet on the right.

The figures 1 to 31 represent calendar days, and entries should be made for each day - even when driver does not work, if no work is performed, enter zero (0) in first column and compute other columns as explained below.

	Nours Worked Today				Enter the is space the fir works Colun tomor		Hours Worked Today		HR77 D V≣HS D	
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Last 7 days of preceding month		Total hours on-duty last <b>7</b> days – OR – Total hours on-duty	Hours available tomorrow. 70 hours minus col. A	Total hours on-duty last <b>8</b> days – OR – Total hours on-duty since	To HOU! Enter the number of working hours (on duty & driving) for each of the last seven days of the preceding month in the first seven spaces under the column headed "Hours Worked Today". Enter in the first space under Column A the Todal of the number of hours worked during the last? I days. Subtract the figure entered in Column A from 70 hours and enter this figure - hours available for tomorrow - in Column B.	Last 6 days of preceding month		Total hours on-duty last <b>6</b> days - OR - Total hours on-duty	Hours available tomorrow. 60 hours minus col. A	Total hours on-duty last 7 days - OR - Total hours on-duty since restart
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6					70 HOURS - 8 DAYS  720 HOURS - 8 DAYS  720 HOURS - 8 DAYS  721 Hours worked during the last 8 days and enter in Column C. If any number in Column C exceeds 70, no driving should have been done. Any driving that was done is a violation intered in and should be circled for easy identification.  34-hour restart: If you took 34 consecutive hours off duty, you have 70 hours available again. You would then begin your totaling on the day of the restart and not go back the full 7 or 8 days.	6				
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20					60 HOURS - 7 DAYS Follow the same instructions provided for completing summary sheet for 8 days – 70 hours, except substitute six days for last seven days and 60 hours for 70 hours.  34-hour restart: If you took 24 consecutive hours off duty, have 60 hours available again. You would then begin 1 totaling on the day of the restart and not go back the full 6 days.	20				1. 4
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BOUND EDGE (SAP 500605) (Rev. 8/05)

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Shipper & Commodity	Enter name of place y	ou reported and where released:	from work and when and w	here each change of duty occurred.	ali yo bi co bour

DRIVER'S DAILY LOG	(Month) (Day) (Year) Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday
<b>W</b> .	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today	4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	I certify these entries are true and correct:  Driver's Full Signature Co-Driver's Name	A. Total hours on
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 HOURS	duty last 7 days. including today.
2. SLEEPER BERTH		B. Total hours available tomorrow 70 hr. minus A.*
3. DRIVING		C. Total hours on duty last 8 days.
(NOT DRIVING) MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	including today.  60 Hour/ 7 Day Drivers
REMARKS		A. Total hours on duty last 6 days.
		B. Total hours
SHIPPING DOCUMENTS:		available toicorrow. 60 hr. minus A.*
B/L or Manifest No. or	601-L	Total hours on duty last 7 days, including today
Shipper & Commodity Enter name of place y From:	ou reported and where released from work and when and where each change of duty occurred.  To:	*If you took 34 consecutive hours off duty you have 60/70 hours available
USE TIME	STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	again.

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ange of duty occurred.

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#### Instructions for Completing the Driver's Daily Log (§395.8)

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, As a driver, you are required to fill out a daily log (duty status record) for each 24-hour period. You must have a log for every day, including days off.

All information must be true and correct. You must make all of your own entries (except for preprinted items). If you make any incomplete or false entries, both you and/or your carrier are liable to prosecution.

#### Information Required on the Form

You must provide the following information on the form:

Date. You must write down the month, day, and year for the beginning of each 24-hour period.

Total miles driving today. You must record the total number of miles you drove during the 24-hour period.

Truck or tractor and trailer numbers. You must write down either the vehicle number(s) assigned by your company, or the license number and licensing state for each commercial motor vehicle operated during the 24-hour period.

Name of carrier. You must write down the name of the motor carrier(s) you are working for. If you are working for more than one carrier in a 24-hour period, you must list the times you started and finished work for each carrier.

- : Driver's signature/certification. You must certify that all of your entries are true and correct by signing your log with your legal name or name of record.
- Time base to be used. You must use the time standard in effect at your home terminal, and also the 24-hour period starting time designated for your home terminal.
- Main office address. Your carrier's main office address must be on the record of duty status.

Remarks. This is the area where you must list the city, town, or village, and state abbreviation when a change of duty status occurs.

Name of co-driver. Write the name of your co-driver, if you have one.

Total hours. You must add and record the total hours for each duty status at the right of the grid. The total of the entries must equal 24 hours.

Shipping document number(s), or name of shipper and commodity.

#### How to Complete the Grid

The grid portion of your log must be kept current to the time shown for the last change of duty status. You must record your duty status on the grid as follows:

- Off Duty
- Sleeper Berth
- Driving
- On Duty (Not Driving)

Off Duty. Except for time resting in a sleeper berth, between the appropriate time markers to show the period of t

Sleeper Berth. You must draw a continuous line the appropriate time markers to show the periods of time when the u are off duty to the sleeper berth.

Driving. You must draw a continuous to between a show the periods of time when you are a time driving which vehicle in operation.

On Duty (Not Driving). You must draw a continuous has been pay propriete time markers to show the periods of time when you are on but in the large.

e markers to

For each change of duty status, the name of the classical problem with state abbreviation, must be recorded in the Remarks section get by duty status occurs at a location of the than a city, town, or village show one of the following:

- The highway warmer and the nearest milepost following the me of the nearest city, town, or village and state abbreviation,
- The highway number and the name of the service the name of the nearest city, town, or village and state abbreviation.
- The highway numbers of the two nearest intersecting treating to fallowed by the name of the nearest city, town, or village, and state about the second secon

### A Rea Additional Notes

After you have completed your log, the regulations at the complete of the original copy to your employer. Your employer may require you be another in scooner.

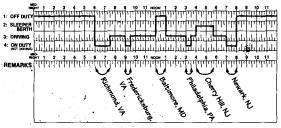
You must keep a copy of your completed log for the next? corrective days. The copies must be available for inspection by law enforcement areany time while you are on duty.

If you work for more than one motor carrier during a 24-hot, pend, you must submit a copy of your record of duty status to each motor carrier. The post include:

- · All duty time for the entire 24-hour period,
- The name of each many carrier you worked for during the period, and
- The beginning and sishing time, including a.m. or p.f., whered for each metor carrier.



The following grid illustrates how a driver's duty status should be recorded for a tr om Richmond, Virginia, to Newark, New Jersey. The grid reflects the midnight-to-midnight 24-hour period.



## Graph Grid (midnight to midnight operation)

the motor carrier's terminal. The driver reported for work at 6 a.m., helped load, checked with dispatch, made a pretrip inspection, and performed other duties until 7:30 a.m. when the driver began driving. • 9 a.m. the driver had a minor accident in Fredericksburg, Virginia, and spent one half hour handling details with the local police. The driver arrived at the company's Baltimore, Maryland, terminal at noon and went to lunch while minor repairs were made to the fractor. At 1 p.m. the driver resumed the trip and made a delivery in Philadelphia, Bennsylvania,

The driver in this instance reported for duty at between 3 p.m. and 3:30 p.m. at which time the driver started driving again. Upon arrival at Cherry Hill, New Jersey, at 4 p.m., the driver entered the sleeper berth for a rest break until 5:45 p.m. at which time the driver resumed driving again. At 7 p.m. the driver arrived at the company's terminal in Newark, New Jersey. Between 7 p.m. and 8 p.m. the driver prepared the required paperwork including completing the driver's record of du status, ariver vehicle inspection report, insuran report for the Fredericksburg, Virginia accid checked for the next day's dispatch, etc. At 8 p.m. the driver went off duty.

# colonations

# Main Points of 2005 Hours of Service Regulation (Property-Carry ind Vehicles)

O J. J. Keller & Associates, inc.

- Off-duty time: 10 consecutive hours.
- On-duty time: 14 consecutive hours after coming on duty.
- Driving time: 11 hour
- Weekly limits: 60 how /7 days or 70 hours/8
- days (no change): 34-hour restart: The 60/70-hour clock may restart after processoritive hours of duty.

but less than 1 consecutive ours

- hour and 14-hour rules must b from the end of the first of the
- Short-haul 16-hour except on-duty period driver has been released normal work reporting loca 5 duty tours.





OFFICIAL DELUXE COPY.

# DRIVER'S DAILY LOG

PRESCRIBED BY FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

MONTH: Dec 10-31 YEAR: 2

 $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$   $\mathbb{Z}$ 

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Rev. 7/06

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MONTHL	. CIRARAA	DV	CHEET
MONIHL	Y SUMMA	וחו	SHEEL

MONTH:

If you operate on the period of 70 hours in 8 days, use the summary sheet on the left; if you operate on the period of 60 hours in 7 days, use the summary sheet on the right.

The figures 1 to 31 represent calendar days, and entries should be made for each day - even when driver does not work, if no work is performed, enter zero (0) in first column and compute other columns as explained below.

	Hours Worked Today	70	HP/6 D		At the end of each day, complete the first three columns adjacent	To the fast seven days of the preceding month in the first seven spaces under the column headed "Hours Worked Today." Enter in spaces under the column headed "Hours Worked Today." Enter in the first space under Column A the Total of the number of hours worked during the last 7 days. Subtract the figure entered in Column A from 70 hours and enter this figure - hours available for comorrow - in Column B.		Hours Worked Today (Total of		HP// D Nexes o	A Year a
Day of mo.	(Total of lines 3 & 4 on graph)	Α	В	С	end of	he nur it seve under under t spac t durir d durir	Day of mo.	lines 3 & 4 on graph)	Α	В	C
		Total hours	Hours	Total hours on-duty	each	nber an da the e unc e unc om 70 Colu			Total hours on-duty	Hours available	Total hour on-duty
		on-duty last	available tomorrow. 70 Hours ; minus	last	day	ys c ys c ber C ler C las	÷ ₽		last	tomorrow.	last
<u> </u>		7.	70 sture	8	, g	orkii of th of th Oolui st 7	s o		6	60 hours	7.
Last 7 days of receding mont	4 J	days - OR otal-hours on-duty	pinus	odays OR-	mpl	ng h e pr lead nn / day	gay		days OR	minus	days - OR -
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Last 7 days of preceding month		on duty		on-duty	the f	ding ding Hou e To Subt	Last 6 days of preceding month		on-duty	4.	on-duty since
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5					용	- 8 DAYS to the da Total the I in Column should ha and shoul 34-hour I have 70 h	5_				
6			ļ · ·		on the day of the restart and not go back the full 7 or 8 days	8 DAYS to the days of month in the same manner as explained above, to the days of month in the same manner as explained above, to the days and enter froat the number of hours worked during the last 8 days and enter in Column C. If any number in Column C exceeds 70, no driving should have been done. Any driving that was done is a violation and should be circled for easy identification.  34-hour restart: If you took 34 consecutive hours off duty, you have 70 hours available again. You would then begin your totaling	6				
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16					ays.	ned a s and no d a vic a vic f duty	16_				
17_						bove enter briving plation otaling	17				
18					L		18				
19						60 HOURS - 7 DAYS Follow the same instructions provided for completing the summary sheet for 8 days - 70 hours, except substitute last six days for last seven days and 60 hours for 70 hours.  34-hour restart: If you took 34 consecutive hours off duty, you have 60 hours available again. You would then begin your totaling on the day of the restart and not go back the full 6 or 7 days.	19				
20						60 HOURS - 7 DAYS Follow the same instructions provided for completing the summary sheet for 8 days - 70 hours, except studstitute last six days for last seven days and 60 hours for 70 hours.  34-hour restart: If you took 34 consecutive hours off duty, you have 60 hours available again. You would then begin your totaling on the day of the restart and not go back the full 6 or 7 days.	20		_		
21						e sai shee or lasi <b>estar</b> nours	21				
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X 405 Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days RECAP DRIVER'S DAILY LOG CES ENVIRONMENTAL SERVICES Name of Carrier or Carriers On-duty hours today. (Total lines 3 & 4) ري 4904 GRIGGS RD. - HOUSTON, TX 77021 Total Miles Driving Today Total Mileage Today Main Office Address 70 Hour/ 8 Day Drivers 4904 GRIGGS RD. - HOUSTON, TX 77021 Home Terminal Address 1264 85 8/77/126 Truck/Tractor and Trailer Numbers or I certify these entries are Total hours on duty last 7 days. License Plate(s) / State (show each unit) Driver's Full Signature Co-Driver's Name including today. 6 Total hours available 1. OFF DUTY 2. SLEEPER tomorrow. 70 hr. minus A.* BERTH 3. DRIVING Total hours on duty last 8 days, including today. 4. ON DUTY
(NOT DRIVING) 60 Hour/ 7 Day Drivers MID-NIGHT 10 11 NOON 1 5 7 2 2 3 8 9 REMARKS A.
Total hours on duty last 6 days, including today. Total hours available SHIPPING tomorrow 60 hr. minus A.* DOCUMENTS: C. Total hours on B/L or Manifest No. duty last 7 days, including today. *If you took 34 consecutive hours off duty, you have 60/70 hours available again. Shipper & Commodity enter name of place you reported and where released from work and when and where each change of duty occurred From: USE TIME STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.

<b>A</b> A	DAILY LOG	(Month) (Day) (Year)  CES ENVIRONME  Name of Carri  4904 GRIGGS RD H	er or Carriers	RECAP Complete at end of workday  On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Toda	y Total Mileage Today	4904 GRIGGS RD H	e Address HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
Truck/Tractor and Tr	uiler Numbers or	I certify these entries are true and correct:	nal Address	A. Total hours or
License Plate(s) / State MID- NIGHT 1 2		Driver's Full Signature           .8         9         10         11         NOON         1         2         3         4	Co-Driver's Name  5 6 7 8 9 10 11 HOURS	duty last 7 days including today
1. OFF DUTY 2. SLEEPER BERTH			<del>11   1   1   1   1   1   1   1   1   1 </del>	B. Total hours available tomorrow. 70 hr. minus A
3. DRIVING 4. ON DUTY (NOT DRIVING)				C. Total hours or duty last 8 days including today
MID- NIGHT 1 2 REMARKS	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
				A. Total hours on duty last 6 days including today
SHIPPING DOCUMENTS:				B. Total hours available tomorrow. 60 hr. minus A.
B/L or Manifest No.			601-L	C. Total hours on duty last 7 days including today
Shipper & Commodity From:	<u> </u>	u reported and where released from work and when	2005 & Published by J. J. KELLER & ASSOCIATES, INC.	34 consecutive hours off duty you have 60/70 hours available

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again.

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again

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again.

To:

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USE TIME STANDARD AT HOME TERMINAL

From:

Enter name of place you reported and where released from work and when and where each change of duty occurred

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USE TIME STANDARD AT HOME TERMINAL

₁/05

Shipper & Commodity

From:

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Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)  Driver's Full Signature	Co-Driver's Name	Total h
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Shipper & Commodity  Enter name of place you reported and where released from work and when and	where each change of duty occurred.	*If you 34 cons hours o
		you have



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Time base to be used. You must use the time standard in effect at your home terminal, and also the 24-hour period starting time designated for your home terminal.

Main office address. Your carrier's main office address must be on the record of duty status.

Remarks. This is the area where you must list the city, town, or village, and state abbreviation when a change of duty status occurs.

Name of co-driver. Write the name of your co-driver, if you have one.

Total hours. You must add and record the total hours for each duty status at the right of the grid. The total of the entries must equal 24 hours.

Shipping document number(s), or name of shipper and commodity.

#### How to Complete the Grid

The grid portion of your log must be kept current to the time shown for the last change of duty status. You must record your duty status on the grid as follows:

- Off Duty
- Sleeper Berth
- Drivina
- On Duty (Not Driving)

Off Duty. Except for time resting in a sleeper berth, you must draw a continuous line between the appropriate time markers to show the periods of time when you are not on duty, not required to be in readiness to work, or not under any responsibility for performing work.

**Sleeper Berth.** You must draw a continuous line between the appropriate time markers to show the periods of time when you are off duty, resting in a sleeper berth.

**Driving.** You must draw a continuous line between the appropriate time markers to show the periods of time when you are at the driving controls of a commercial motor vehicle in operation.

On Duty (Not Driving). You must draw a continuous line between the appropriate time markers to show the periods of time when you are on duty, but not driving.

For each change of duty status, the name of the city, town, or village, with state abbreviation, must be recorded in the Remarks section. If the change of duty status occurs at a location other than a city, town, or village, you must show one of the following:

- The highway number and the nearest milepost followed by the name of the nearest city, town, or village and state abbreviation,
- The highway number and the name of the service plaza followed by the name of the nearest city, town, or village and state abbreviation, or
- The highway numbers of the two nearest intersecting roadways followed by the name of the nearest city, town, or village, and state abbreviation.

### A Few Additional Notes

After you have completed your log, the regulations allow you 13 days to forward the original copy to your employer. Your employer may require you to turn it in sooner.

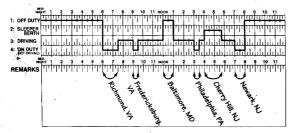
You must keep a copy of your completed log for the next 7 consecutive days. The copies must be available for inspection by law enforcement at any time while you are on duty.

If you work for more than one motor carrier during a 24-hour period, you must submit a copy of your record of duty status to each motor carrier. The record must include:

- · All duty time for the entire 24-hour period,
- · The name of each motor carrier you worked for during the 24-hour period, and
- The beginning and finishing time, including a.m. or p.m., worked for each motor carrier.

# Sample Completed Grid

The following grid illustrates how a driver's duty status should be recorded for a trip from Richmond, Virginia, to Newark, New Jersey. The grid reflects the midnight-to-midnight 24-hour period.



# **Graph Grid (midnight to midnight operation)**

The driver in this instance reported for duty at the motor carrier's terminal. The driver reported for work at 6 a.m., helped load, checked with dispatch, made a pretrip inspection, and performed other duties until 7:30 a.m. when the driver began driving. At 9 a.m. the driver had a minor accident in Fredericksburg, Virginia, and spent one half hour handling details with the local police. The driver arrived at the company's Baltimore, Maryland, terminal at noon and went to lunch while minor repairs were made to the tractor. At 1 p.m. the driver resumed the trip and made a delivery in Philadelphia, Pennsylvania,

between 3 p.m. and 3:30 p.m. at which time the driver started driving again. Upon arrival at Cherry Hill, New Jersey, at 4 p.m., the driver entered the sleeper berth for a rest break until 5:45 p.m. at which time the driver resumed driving again. At 7 p.m. the driver arrived at the company's terminal in Newark, New Jersey. Between 7 p.m. and 8 p.m. the driver prepared the required paperwork including completing the driver's record of duty status, driver vehicle inspection report, insurance report for the Fredericksburg, Virginia accident, checked for the next day's dispatch, etc. At 8 p.m., the driver went off duty.



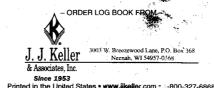
# Main Points of 2005 Hours of Service Regulations (Property-Carrying Vehicles)

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- Off-duty time: 10 consecutive hours.
- On-duty time: 14 consecutive hours after coming on duty.
- Driving time: 11 hours.
- Weekly limits: 60 hours/7 days or 70 hours/8 days (no change).
- 34-hour restart: The 60/70-hour clock may restart after 34 consecutive hours off duty.
- Split sleeper berth: One period of at least 8 (but less than 10) consecutive hours in the sleeper berth; and a separate period, before or after the 8-hour period, of at least 2 (but less than 10) consecutive hours. The 2-consecutive-hour period may be in the sleeper n, off duty, or any combination of the two. 8-hour period will not be counted as part of 4 hours, but the 2-hour period will be d as part of the 14 hours. Following the period, hours available under the 11-

hour and 14-hour rules must be re-calculated from the end of the first of the two periods.

- Short-haul 16-hour exception: The 14-hour on-duty period can be extended to 16 hours if driver has been released from duty at the normal work reporting location for the process 5 duty tours, is released from duty at the normal work reporting location within 16 hours, and has not used exception in the previous 6 days (except following a 34-hour restart of a 7/8-day period).
- Compliance Date: October 1, 2005







**OFFICIAL DELUXE COPY** 

# DRIVER'S DAILY LOG

PRESCRIBED BY FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

MONTH: August

YEAR: 0008

DRIVER: Sittig B.

CARRIER: (_____)

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Rev. 7/0

### **MONTHLY SUMMARY SHEET**

MONTH:

If you operate on the period of 70 hours in 8 days, use the summary sheet on the left; if you operate on the period of 60 hours in 7 days, use the summary sheet on the right.

The figures 1 to 31 represent calendar days, and entries should be made for each day - even when driver does not work. If no work is performed, enter zero (0) in first column and compute other columns as explained below.

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1					At the end of each day, complete the first three columns adjacent	worked during the last 7 days. Subtract the figure entered in Column A from 70 hours and enter this figure - hours available for tomorrow - in Column B.	70 HOUI Enler the number of working hours (on duty & driving) for each of the last seven days of the preceding month in the first seven spaces under the column headed "Hours Worked Today". Enter in the first sevane that spaces under the column A the Total of the number of hours the first space under Column A the Total of the number of hours.	1				·
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27					]	have 60 hours available again. You would then begin your totaling on the day of the restart and not go back the full 6 or 7 days.	60 HOURS - 7 DAYS  Follow the same instructions provided for completing the summary sheet for 8 days - 70 hours, except substitute last six days for last seven days and 60 hours for 70 hours.  Advoir petart: If you hove 40 consentitive hours off duty you	27				L
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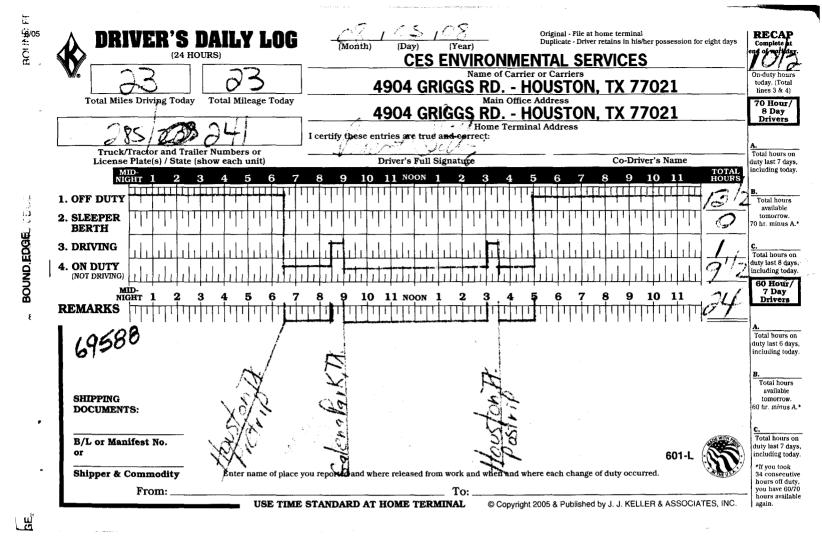
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again.

To:

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USE TIME STANDARD AT HOME TERMINAL

From:

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hours off duty, you have 60/70 hours available again.

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Enter name of place you reported and where released from work and when and where each change of duty occurred.

USE TIME STANDARD AT HOME TERMINAL

Shipper & Commodity

From:

*If you took 34 consecutive hours off duty, you have 60/70 hours available again.

© Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.

To:

or

Shipper & Commodity

From:

601-L

when and where each change of duty occurred.

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*If you took 34 consecutive hours off duty, you have 60/70 hours available

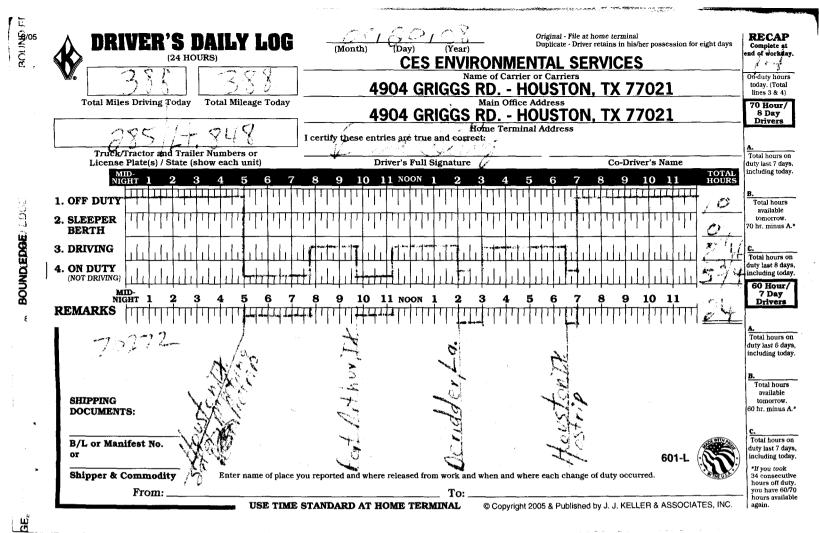
To:

USE TIME STANDARD AT HOME TERMINAL

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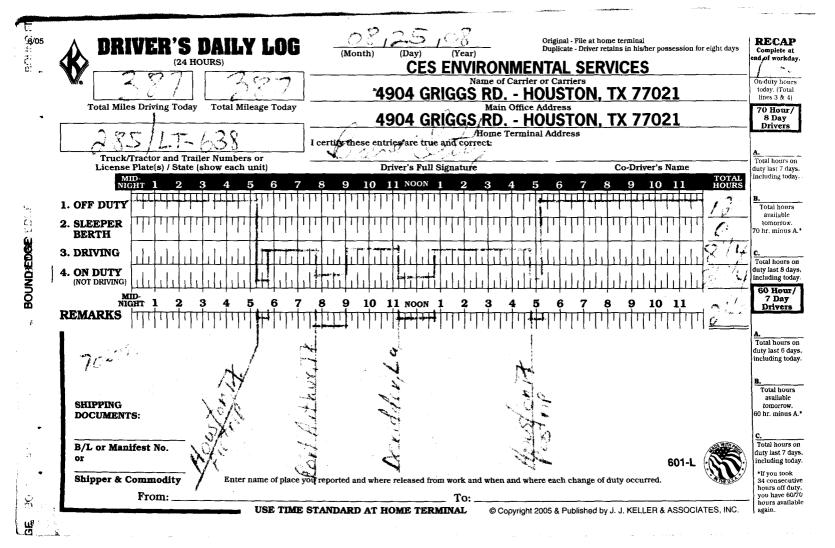
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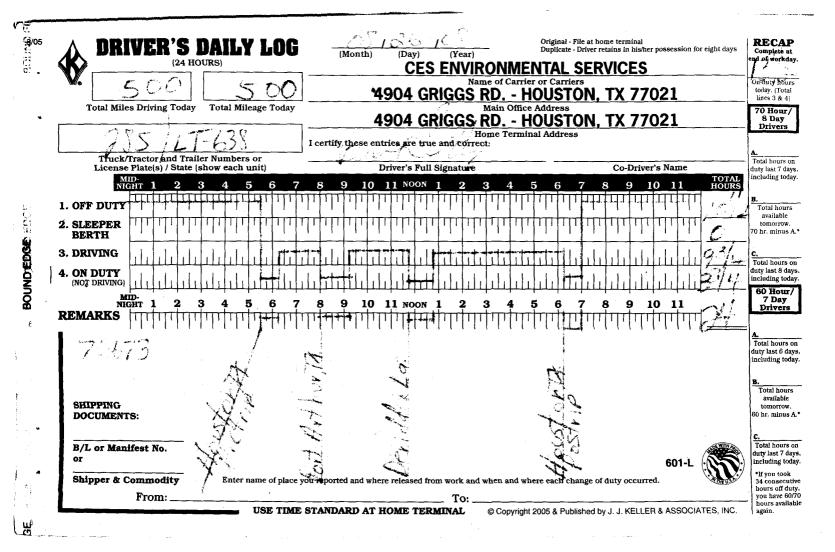
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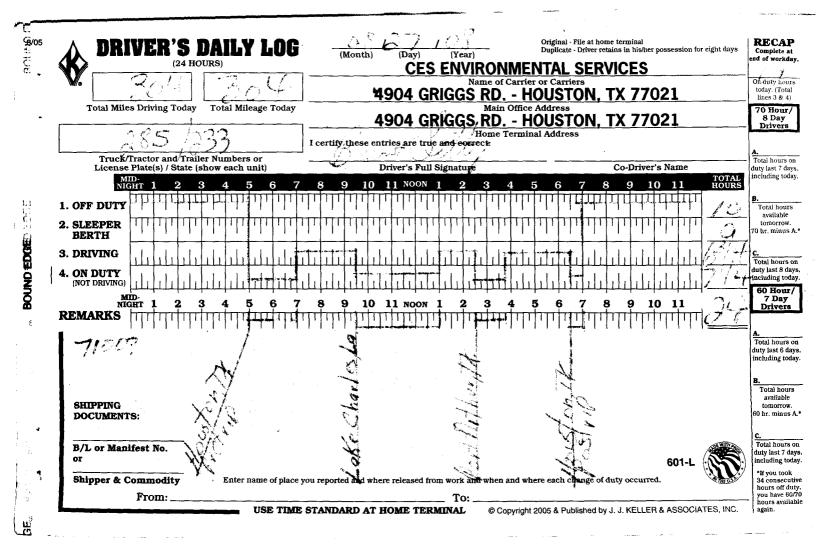


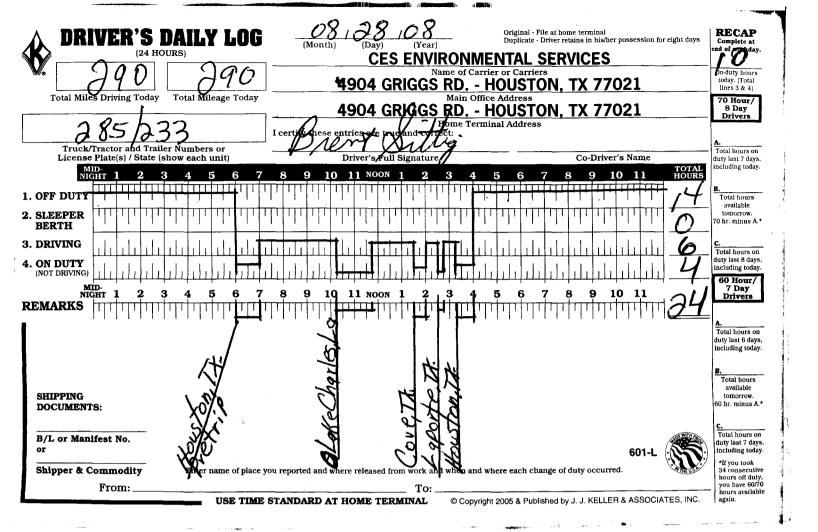
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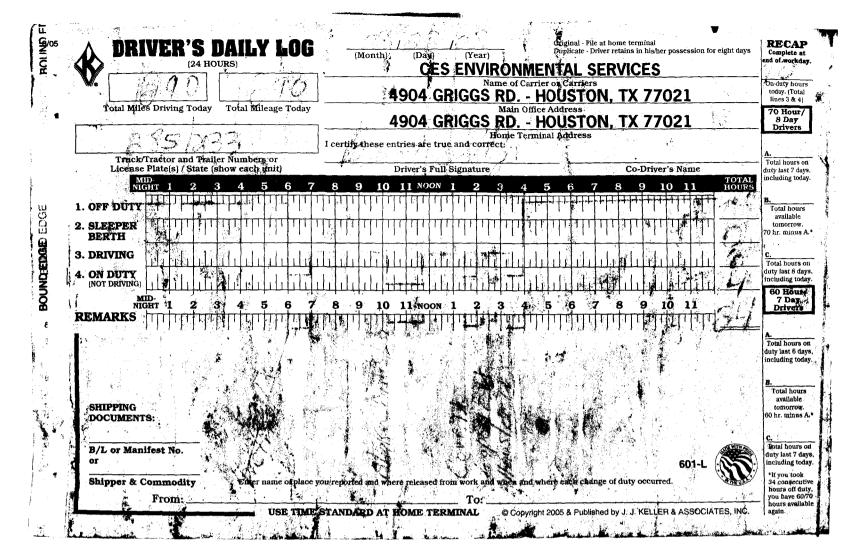
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### ons for Completing the Driver's Daily Log (§395.8)

© J. J. Keller & Associates, Inc.
As a driver, you are required to fill out a daily log (duty states record) for each the hour Off Duty. Ex riod. You must have a log for every day, including days off

All information must be true and correct. You must make all of your own entries (except preprinted items). If you make any incomplete or false entries, both you and/or your rrier are liable to prosecution.

### formation Required on the Form

You must provide the following information on the form:

Date. You must write down the month, day, and year for the beginning of each 24-hour period.

'Total miles driving today. You must record the total number of miles you drove during the 24-hour period.

²Truck or tractor and trailer numbers. You must write down either the vehicle umber(s) assigned by your company, or the license number and licensing state for each immercial motor vehicle operated during the 24-hour period.

Name of carrier. You must write down the name of the motor carrier(s) you are drking for. If you are working for more than one carrier in a 24-hour period, you must list e times you started and finished work for each carrier.

Driver's signature/certification. You must certify that all of your entries are true and correct by signing your log with your legal name or name of record,

Time base to be used. You must use the time standard in effect at your home firminal, and also the 24-hour period starting time designated for your home terminal.

Main office address. Your carrier's main office address must be on the record of duty

Remarks. This is the area where you must list the city, town, or village, and state by eviation when a change of duty status occurs.

Name of co-driver. Write the name of your co-driver, if you have one.

Total hours. You must add and record the total hours for each duty status at the right. the grid. The total of the entries must equal 24 hours.

Shipping document number(s), or name of shipper and commodity.

low to Complete the Grid

The grid portion of your log must be kept current to the time shown for the last change duty status. You must record your duty status on the grid as follows:

- Off Duty
- Sleeper Berth
- Driving
- On Duty (Not Driving)

Off Duty. Except for time resting in a sleeper berth, you must draw a continuous line between the appropriate time markers to show the periods of time when you are not or duty, not required to be in readiness to work, or not under any responsibility for performing work.

Sleeper Berth. You must draw a continuous line between the appropriate time markers to show the periods of time when you are off duty, resting in a sleeper berth.

Driving. You must draw a continuous line between the appropriate time markers to show the periods of time when you are at the driving controls of a commercial motor vehicle in operation.

On Duty (Not Driving). You must draw a continuous line between the appropriate time markers to show the periods of time when you are on duty, but not driving.

For each change of duty status, the name of the city, town, or village, with state abbreviation, must be recorded in the Remarks section. If the change of duty status occurs at a location other than a city, town, or village, you must she

- by the name of the nearest • The highway number and the nearest milepost
- city, town, or village and state abbreviation service plaza followed by the name of the The highway number and the name abbreviation, or nearest city, town, or village and state abbreviation, or
- The highway numbers of the two nearest intersecting readways followed by the name of the nearest city, town, or village, and state abbreviation.

A Few Additional Notes

After you have completed your log, the regulations allow you 13 days to forward the original copy to your employer. Your employer may require you to turn it in sooner.

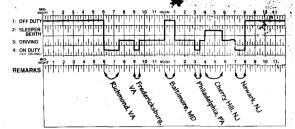
You must keep a copy of your completed log for the next 7. consecutive days. The spies must be available for inspection by law enforcement at any time while you are on

If you work for more than one motor carrier during a 24-hour period, you must submit copy of your record of duty status to each motor carrier. The record must include:

- All duty time for the entire 24-hour period,
- The name of each motor carrier you worked for during the 24-hour period, and
- The beginning and finishing time, including a.m. or p.m., worked for each more

Sample Completed Crid

The following grid illustrates how a driver's duty status should be recorded for a trip from Richmond, a, to Newark, New Jersey. The grid reflects the midnight to menight 2 hour period.



#### **Graph Grid (midnight to midnight operation)**

The driver in this instance reported for duty at the motor carrier's terminal. The driver reported for work at 6 a.m., helped load, checked with dispatch, made a pretrip inspection, and performed other duties until 7:30 a.m. when the driver began driving. At 9 a.m. the driver had a minor accident in Fredericksburg, Virginia, and spent one half hour handling details with the local police. The driver arrived at the company's Baltimore, Maryland, terminal at noon and went to lunch while minor repairs were made to the tractor. At 1 p.m. the driver resumed the trip and made a delivery in Philadelphia, Pennsylvania,

between 3 p.m. and 3:30 p.m. at which time the driver started driving again. Upon arrival at Cherry Hill, New Jersey, at 4 p.m., the driver entered the sleeper berth for a rest break until 5:45 p.m. at which time the driver resumed driving again, At 7 p.m. the driver arrived at the company's terminal in Newark, New Jersey. Between 7 p.m. and 8 p.m. the driver prepared the required paperwork including completing the driver's record of duty status, driver vehicle inspection report, insurance report for the Fredericksburg, Virginia accident, the driver went off duty.



#### Main Points of 2005 Hours of Service Regulations (Property-Carrying Venicles) © J. J. Keller & Associates, Inc.

· Off-duty time: 10 consecutivé hours.

· On-duty time: 14 consecutive hours after coming on duty.

Driving time: 11 hours.

days (no change).

• 34-hour restart: The 60/70-hour clock may restart after 34 consecutive hours off du

 Split sleeper berth: One period of (but less than 10) consecutive h sleeper berth; and a separate per after the 8-hour period; of at leg than 10) consecutive hg consecutive-hour period may in the berth off duty, or any combination of the -hour period will not be counted as be hours, but the 2-hour period d as post of the 14 hours. Police

how and 14 hour rules must be re-calculated fron the end of the first of the two periods.

Sort-hau 16-hour exception: The 14-hour n-futy period can be extended to 16 hours if • Weekly limits: 60 hours/7 days or 70 hours/8 driver has been released from duty at the notinal work reporting location for the previous 5 duty ours, is released from duty at the normal work reporting location within 16 hours. and has not used exception in the prev days (except following a 34-hour res 7/8-day period).

Compliance Date: October





## DRIVER'S DAILY LOG

PRESCRIBED BY FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

MONTH: Oct-Nov. year: 08

CARRIER: CES

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BOUND EDGE (SAP 500605) (Rev. 8/05)

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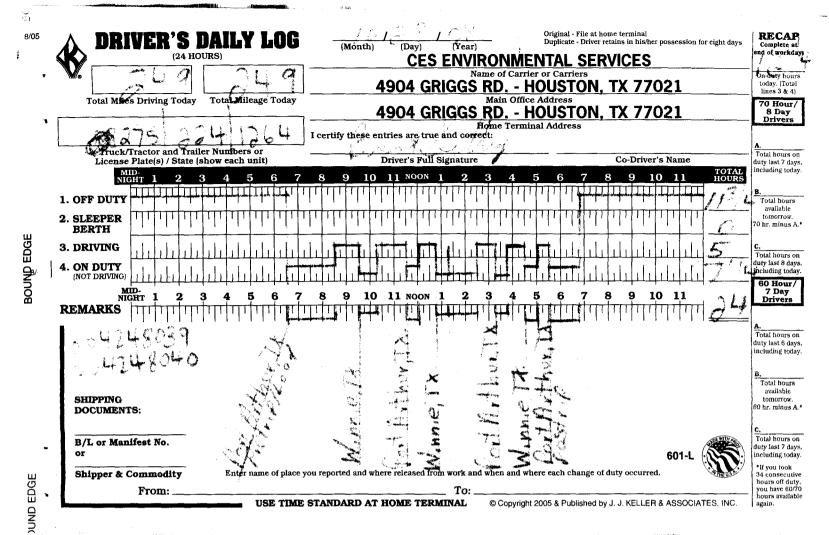
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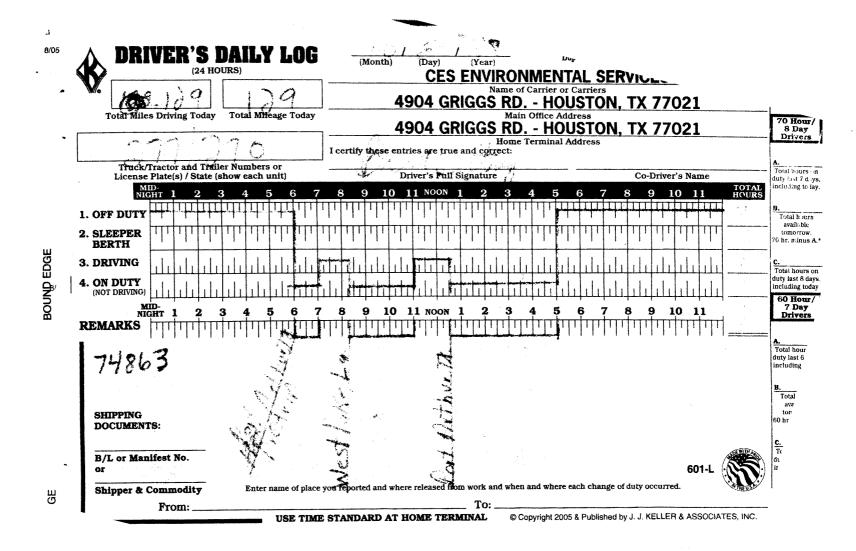
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Enter name of place you reported and where released from work and when and where each change of duty occurred.

USE TIME STANDARD AT HOME TERMINAL

UND EDGE

Shipper & Commodity

From:

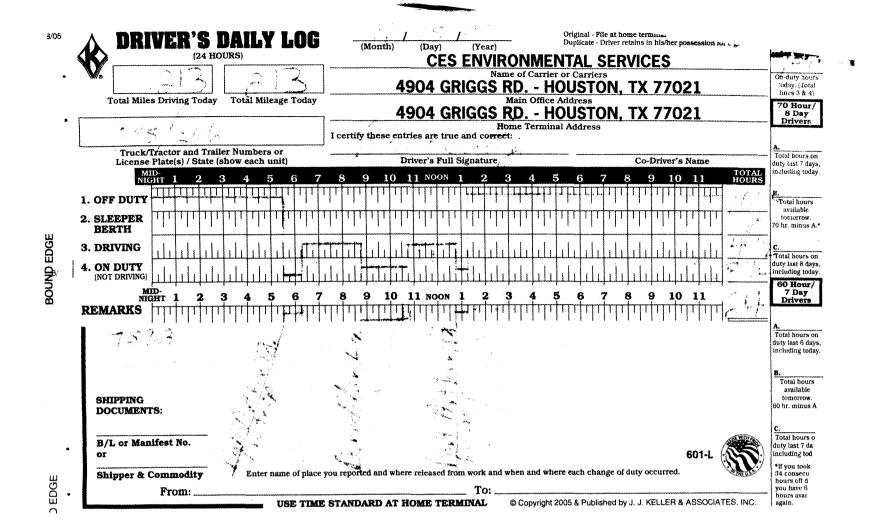
duty last 7 days, including today.

*If you took 34 consecutive hours off duty, you have 60/70 hours available

again.

601-L

. ....



Enter name of place you reported and where released from work and when and where each change of duty occurred.

USE TIME STANDARD AT HOME TERMINAL

To:

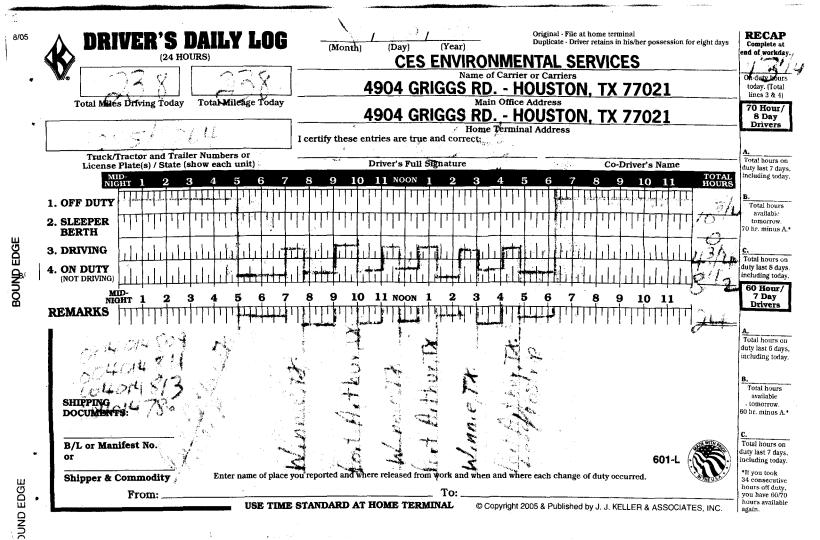
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Shipper & Commodity

From:

UND EDGE

*If you took 34 consecutive hours off duty, you have 60/70 hours available again.





#### Instructions for Completing the Driver's Daily Log (§395.8)

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As a driver, you are required to fill out a daily log (duty status record) for each 24-hour period. You must have a log for every day, including days off.

All information must be true and correct. You must make all of your own entries (except for preprinted items). If you make any incomplete or false entries, both you and/or your carrier are liable to prosecution.

#### Information Required on the Form

You must provide the following information on the form:

Date. You must write down the month, day, and year for the beginning of each 24-hour period.

Total miles driving today. You must record the total number of miles you drove during the 24-hour period.

Truck or tractor and trailer numbers. You must write down either the vehicle number(s) assigned by your company, or the license number and licensing state for each commercial motor vehicle operated during the 24-hour period.

Name of carrier. You must write down the name of the motor carrier(s) you are working for. If you are working for more than one carrier in a 24-hour period, you must list the times you started and finished work for each carrier.

Driver's signature/certification. You must certify that all of your entries are true and correct by signing your log with your legal name or name of record.

Time base to be used. You must use the time standard in effect at your home terminal, and also the 24-hour period starting time designated for your home terminal.

Main office address. Your carrier's main office address must be on the record of duty status.

Remarks. This is the area where you must list the city, town, or village, and state abbreviation when a change of duty status occurs.

Name of co-driver. Write the name of your co-driver, if you have one.

Total hours. You must add and record the fotal hours for each duty status at the right of the grid. The total of the entries must equal 24 hours.

Shipping document number(s), or name of shipper and commodity.

#### How to Complete the Grid

The grid portion of your log must be kept current to the time shown for the last change of duty status. You must record your duty status on the grid as follows:

- Off Duty
- Sleeper Berth
- Driving
- On Duty (Not Driving)

Off Duty. Except for time resting in a sleeper berth, you must draw a continuous line between the appropriate time markers to show the periods of time when you are not on duty, not required to be in readiness to work, or not under any responsibility for performing work.

Sleeper Berth. You must draw a continuous line between the appropriate time markers to show the periods of time when you are off duty, resting in a sleeper berth.

**Driving.** You must draw a continuous line between the appropriate time markers to show the periods of time when you are at the driving controls of a commercial motor vehicle in operation.

On Duty (Not Driving). You must draw a continuous line between the appropriate time markers to show the periods of time when you are on duty, but not driving.

For each change of duty status, the name of the city, town, or village, with state abbreviation, must be recorded in the Remarks section. If the change of duty status occurs at a location other than a city, town, or village, you must show one of the following:

- The highway number and the nearest milepost followed by the name of the nearest city, town, or village and state abbreviation,
- The highway number and the name of the service plaza followed by the name of the nearest city, town, or village and state abbreviation, or
- The highway numbers of the two nearest intersecting roadways followed by the name of the nearest city, town, or village, and state abbreviation.

#### A Few Additional Notes

After you have completed your log, the regulations allow you 13 days to forward the original copy to your employer. Your employer may require you to turn it in sooner.

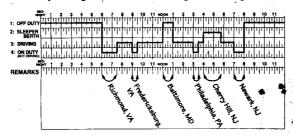
You must keep a copy of your completed log for the next 7 consecutive days. The copies must be available for inspection by law enforcement at any time while you are on duty.

If you work for more than one motor carrier during a 24-hour period, you must submit a copy of your record of duty status to each motor carrier. The record must include:

- All duty time for the entire 24-hour period,
- The name of each motor carrier you worked for during the 24-hour period, and
- The beginning and finishing time, including a.m. or p.m., worked for each motor carrier.



The following grid illustrates how a driver's duty status should be recorded for a trip from Richmond, Virginia, to Newark, New Jersey. The grid reflects the midnight-to-midnight 24-hour period.



#### 🚵 Graph Grid (midnight to midnight operation)

The driver in this instance reported for duty at the motor carrier's terminal. The driver reported for work at 6 a.m., helped load, checked with dispatch, made a pretrip inspection, and performed other duties until 7:30 a.m. when the local performed other duties until 7:30 a.m. when the local police. The driver arrived at the company's Baltimore, Maryland, terminal at noon and went to lunch while minor tapairs were made to the tractor. At 1 p.m. the driver resumed the trip and made a delivery in Philadelphia, Pennsylvania,

between 3 p.m. and 3:30 p.m. at which time the driver started driving again. Upon arrival at Cherry Hill, New Jersey, at 4 p.m., the driver entered the sleeper berth for a rest break until 5:45 p.m. at which time the driver resumed driving again. At 7 p.m. the driver arrived at the company's terminal in Newark, New Jersey. Between 7 p.m. and 8 p.m. the driver prepared the required paperwork including completing the driver's record of duty status, driver vehicle inspection report, insurance report for the Fredericksburg, Virginia accident, checked for the next day's dispatch, etc. At 8 p.m., the driver went off duty.

### Explanations

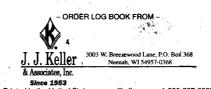
## Main Points of 2005 Hours of Service Regulations (Property-Carrying Vehicles)

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- Off-duty time: 10 consecutive hours.
- On-duty time: 14 consecutive hours after coming on duty.
- Driving time: 11 hours.
- Weekly limits: 60 hours/7 days or 70 hours/8 days (no change).
- 34-hour restart: The 60/70-hour clock may restart after 34 consecutive hours off duty.
- Split sleeper berth: One period of at least 8 (but less than 10) consecutive hours in the sleeper berth; and a separate period, before or after the 8-hour period, of at least 2 (but less than 10) consecutive hours. The 2-consecutive-hour period may be in the sleeper berth, off duty, or any combination of the two. The 8-hour period will not be counted as part of the 14 hours, but the 2-hour period will be counted as part of the 14 hours. Following the

hour and 14-hour rules must be re-calculated from the end of the first of the two periods.

- Short-haul 16-hour exception: The 14-hour on-duty period can be extended to 16 hours if driver has been released from duty at the normal work reporting location for the previous 5 duty tours, is released from duty at the normal work reporting location within 16 hours, and has not used exception in the previous 6 days (except following a 34-hour restart of a 7/8-day period.)
- Compliance Date: October 1, 2005





FEATURES: CARBONLESS BLACK IMAGE PAGES

# VEHICLE INSPECTION REPORT

- SIMPLIFIED DUPLICATE COPY BOOK -

Month:	Year: _	06
Driver:		
Carrier: CES	ENY.	
Tractor/Truck No.:		
Trailer No.:		7 55547 00498
@ 0	000014TEQ INO N	148 LIGA (000) 657 0000

147₂B 2048

#### INSPECTION PROCEDURE

#### HAVE ALL DEFECTS CORRECTED BEFORE DEPARTURE

- Approaching vehicle note general condition. Look for leakage of water, fuel or lubricants under vehicle.
- Under hood check water and crankcase levels. Check fan and compressor belts for cracks and excessive slack and wear. Note general condition of engine space.
- 3. Start engine and set at fast idle for warm-up. Check for abnormal engine noise. Check gauges for normal readings (pilot lights, if equipped), "LOW AIR" warning should operate if air pressure is below 60 pounds. Anti-lock warning light should light briefly and then go out (vehicles with operable anti-lock).
- 4. Check emergency equipment, horn(s), windshield wipers. Turn on all lights including 4-way flasher switch for turn signals. Check steering wheel action.
- 5. Leave cab to check headlights and turn signals. Switch headlights on and check both beams, then turn off headlights *only*. Leave all other lights on.
- 6. Check front clearance and identification lights.
- 7. Check left and right front wheels, tires, lugs or studs. Check for leaks around hubs.
- 8. Check right side of cab, door, mirrors, etc. and check lights and reflectors along right side as inspection progresses.
- 9. Check right rear tractor tires, wheels, lugs or studs. Note any thrown lubricant.
- 10. Check trailer light and brake lines for secure connections. Be sure manual petcocks are open. Be sure lines are properly secured to prevent entangling or chafing.
- 11. Check hook-up: fifth-wheel, jaws, release lever on tractor-trailer, pintle hook, towbar, safety chains, converter gear on full-trailer unit.
- 12. Check right trailer tires, wheels, lugs or studs. Check for thrown lubricant.
- 13. Check rear of body, mudflaps, rear light (clearance and identification, stop, tail, turn signals), rear reflectors, rear-end protection.
- 14. Check left trailer tires, wheels, lugs or studs. Check lights and reflectors on left side as inspection progresses.
- 15. Check left rear tractor tires, wheels, lugs or studs. Check for thrown lubricant.
- 16. Re-enter cab. Re-check all gauges. Air pressure should be at maximum.
- 17. Check parking brake.
- 18. With fully-charged system, check air brakes as follows:
  - a.) Be sure Trailer Air Supply valve is "in" and that trailer brake air system(s) are charged. Apply and release brakes with treadle valve.
  - b.) Pull out Trailer Air Supply valve to check manual application of trailer brakes.
  - c.) Reduce air pressure by rapid application and release of treadle valve. "LOW AIR" warning should operate when primary needle reaches 60 psi. Brakes should apply automatically when secondary needle reaches a point between 45 and 20 psi.
  - d.) Recharge trailer air system to check for leaks. With engine idling, apply treadle valve and hold for 1 minute. After initial drop of 5-10 psi, air pressure should not drop more than 4 psi. If audible leaks or rapid pressure drop are noted, have repairs made before departure.
- 19. Turn off 4-way flasher and actuate left and right turn signals. Proper operation of turn signals can be ascertained by checking front ones.
- 20. Make a test stop before leaving yard. Drain air tanks daily. Check tires every 2 hours or every 100 miles when carrying placarded hazardous materials.
- 21. Use this form to report vehicle condition at end of run.

#### DON'T FORGET

- FASTEN YOUR SEAT BELT CHARGE TRAILER AIR RESERVOIRS
- FOR HAZARDOUS MATERIALS CHECK PLACARDS AND SHIPPING PAPERS

Location (E) HOUSTON, TX	
Truck/Tractor	
Dolly	Trailer #2
Odometer Mileage <u>035 73 7</u>	
	olain any Defects
Engine	
Transmission	
Clutch	
Steering Mechanism	
Horn	
Windshield Wipers/Washers	
Rear Vision Mirrors	
Lighting Devices and Reflectors	
Parking Brake	
Service Brakes	
Air Lines/Light Lines	
Coupling Devices	
Tires	
Wheels and Rims	
Emergency Equipment	
Other	
Vehicle condition OK (This must be checked if there are no defects)	Reporting Driver's Signature
Defects do not need to be corrected for safe	cts Corrected  ied by:  Mechanic's Signature
Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., N	WHITE - MAINTENANCE CANARY - DRIVER REVIEW Neenah, WI • USA • (800) 327-6868 • Printed in the United States

Location.		Date <u></u>	15/06	8277132
Truck/Tra	actor <i>288</i>	Trailer #1	<u> </u>	
Dolly		Trailer #2		
Odomete	er Mileage <u>025.836</u>			
Check √	E	xplain any Defe	ects	
	Engine			
	Transmission			
	Clutch			
	Steering Mechanism			
	Horn			
	Windshield Wipers/Washers			
	Rear Vision Mirrors			
	Lighting Devices and Reflector	s		
	Parking Brake			
	Service Brakes			
	Air Lines/Light Lines			
	Coupling Devices			
	Tires			
	Wheels and Rims			
	Emergency Equipment			
	Other			
This) لــــّــا	icle condition OK s must be checked if e are no defects)	Reporting	Driver's Sigi	nature
be c	orrected for safe	ects Corrected	Mechanic	's Signature
Reviewin	g Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC	Noonah Wistick (200	n) 227 6860 - Dd	WHITE - MAINTENANCE CANARY - DRIVER REVIEW
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Location CE Houston, Tx			8277133	
Truck/Tractor		Trailer #1		
Dolly		Trailer #2		
Odometer	Mileage 005950	·		
Check ✓	Ex	plain any Defects		
	Engine			
	Transmission			
	Clutch			
	Steering Mechanism			
	Horn			
	Windshield Wipers/Washers			
	Rear Vision Mirrors			
	Lighting Devices and Reflectors	3		
	Parking Brake			
	Service Brakes			
	Air Lines/Light Lines			
	Coupling Devices			
	Tires			
	Wheels and Rims			
	Emergency Equipment			
	Other			
(This	cle condition OK must be checked if are no defects)	Reporting Driver's Sig	nature	
1 1	orrected for safe	ects Corrected tified by:	's Signature	
	g Driver's Signature Copyright 1998 J. J. KELLER & ASSOCIATES, INC.	, Neenah, WI • USA • (800) 327-6868 • Printe	WHITE - MAINTENANCE CANARY - DRIVER REVIEW d in the United States	

BOUND EDGE			
R( )			

Location CES Houston, TX Date 8-17-06 8277134 Truck/Tractor_278 Dolly _ Trailer #2 Odometer Mileage <u>166637</u> Check √ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers Rear Vision Mirrors Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if Reporting Driver's Signature there are no defects) Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: _ Mechanic's Signature Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., Neenah, WI • USA • (800) 327-6868 • Printed in the United States

Location :	CES Housson, TX	Date <u>6-78-</u>	06	8277135
Truck/Tractor <u>373</u>		Trailer #1		
Dolly		_ Trailer #2		
Odometer	Mileage <u>953959</u>			
Check ✓	Ex	olain any Defects		
	Engine			
	Transmission			
	Clutch			
	Steering Mechanism			
	Horn			
	Windshield Wipers/Washers			
	Rear Vision Mirrors			
	Lighting Devices and Reflectors			
	Parking Brake			
	Service Brakes			
	Air Lines/Light Lines			
	Coupling Devices			
	Tires			
	Wheels and Rims			
	Emergency Equipment			
$\overline{}$	Other			
This	cle condition OK must be checked if are no defects)	Reporting Drive	r's Signa	ature
	orrected for safe	cts Corrected	chanic's	Signature
	g Driver's Signature O Copyright 1998 J. J. KELLER & ASSOCIATES, INC.,	Neenah, WI • USA • (800) 327-68		WHITE - MAINTENANCE CANARY - DRIVER REVIEW I the United States

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***	BOUND EDGE	
DRIVER'S VE Completion of this repo	HICLE INSPECTION ort required by Federal Law 49 CFR 39	<b>REPORT</b> 6.11 & 396.13
Truck/Tractor <u>273</u>	7x Date 8-19-06 Trailer #1 Trailer #2	
	Explain any Defects	
Steering Mechanism Horn		
Windshield Wipers/W Rear Vision Mirrors Lighting Devices and		
Parking Brake Service Brakes Air Lines/Light Lines		
Coupling Devices  Tires  Wheels and Rims		
Emergency Equipmer Other	nt	
Vehicle condition OK (This must be checked if there are no defects)	Reporting Driver's S	Signature

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**Defects Corrected** 

Mechanic's Signature

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Certified by: _

Defects do not need to

be corrected for safe operation

Reviewing Driver's Signature

Location CES Hoo	STONI, TX	Date_ <u>8-21-06</u> Trailer #1 <u>218</u>	8277137
Truck/Tractor_32	}	_ Trailer #1_ <i>- <del>- 2</del>18</i>	
Dolly		Trailer #2	
Odometer Mileage	54/09		
Check ✓		plain any Defects	
Engine			
Transmissio	n		
Clutch			
Steering Me	chanism		
Horn			
Windshield V	Vipers/Washers		
Rear Vision	Mirrors		
Lighting Dev	ices and Reflectors		
Parking Brak	(e		
Service Brak	es		
Air Lines/Lig	ht Lines		
Coupling De	vices		
Tires			
Wheels and	Rims		
Emergency	Equipment		
Other			
Vehicle condition ( (This must be check there are no defection)	cked if	Heporting Driver's Sig	nature
Defects do not nee be corrected for sa operation	afe 🗀	ects Corrected  ified by:  Mechanic	s's Signature
Reviewing Driver's Sign © Copyright 1998 J. J.		Neenah, WI • USA • (800) 327-6868 • Printe	WHITE - MAINTENANCE CANARY - DRIVER REVIEW od in the United States

Location CES HOUSTON, TY	Date 8/09/06 8277139  Trailer #18047 43914! (chash)
Truck/Tractor_273	Trailer #18007 432141 (chass)
	Trailer #2
Odometer Mileage 254321	
	lain any Defects
Engine	
Transmission	
Clutch	
Steering Mechanism	
Horn	
Windshield Wipers/Washers	
Rear Vision Mirrors	
Lighting Devices and Reflectors	
Parking Brake	
Service Brakes	
Air Lines/Light Lines	
Coupling Devices	
Tires	
Wheels and Rims	
Emergency Equipment	
Other	
Vehicle condition OK (This must be checked if there are no defects)	Reporting Driver's Signature
be corrected for safe	ets Corrected ied by: Mechanic's Signature
Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., N	WHITE - MAINTENANCE CANARY - DRIVER REVIEW Jeenah, WI • USA • (800) 327-6868 • Printed in the United States

DRIVER'S VEHICLE INSPECTION REPORT
Completion of this report required by Federal Law 49 CFR 396.11 & 396.13 ___ Date <u>8/23/06</u> Location LES HOUSTON, TX 8277140 Truck/Tractor_273 Dolly _ Trailer #2 Odometer Mileage 254475 Check √ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers **Rear Vision Mirrors** Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if Reporting Driver's Signature there are no defects) Defects do not need to **Defects Corrected** be corrected for safe

Certified by: ___

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Mechanic's Signature

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operation

Reviewing Driver's Signature

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DRIVER'S VEHICLE INSPECTION REPORT
Completion of this report required by Federal Law 49 CFR 396.11 & 396.13 8277141 CES HOUSTON, TX Date 8/24/06 Truck/Tractor Dolly _ Trailer #2 Odometer Mileage 254884 Check ✓ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers **Rear Vision Mirrors** Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature

Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: _ Mechanic's Signature

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Location	GES HOUSTON, TX	Date <u>8/2.</u>	5/06	8277142
Truck/Trac	ctor_273	, Trailer #1	218	
Dolly		_ Trailer #2	<del></del> _	
Odometer	Mileage 255 034			
Check ✓		lain any Defec	ts	
	Engine			
	Transmission		·	
	Clutch			
	Steering Mechanism			
	Horn			
	Windshield Wipers/Washers			
	Rear Vision Mirrors			
*	Lighting Devices and Reflectors			
	Parking Brake			
	Service Brakes			
	Air Lines/Light Lines			
	Coupling Devices			
	Tires			
	Wheels and Rims			
	Emergency Equipment			
	Other			
(This	le condition OK must be checked if are no defects)	Reporting D	Priver's Sign	ature
	rrected for safe	ets Corrected	Mechanic's	s Signature
-	J Driver's Signature Copyright 1998 J. J. KELLER & ASSOCIATES, INC., N	Neenah, WI • USA • (800)	327-6868 • Printed	WHITE - MAINTENANCE CANARY - DRIVER REVIEW in the United States

8277143 Location CES HOUSTON, TX Truck/Tractor 3 Dolly _ Trailer #2. Odometer Mileage 255351 Check ✓ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers **Rear Vision Mirrors** Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: . Mechanic's Signature

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DRIVER'S VEHICLE INSPECTION REPORT
Completion of this report required by Federal Law 49 CFR 396.11 & 396.13 Location CES Houston, 7x Date 8/29/06 8277144

Truck/Tractor 273 Trailer #1 25/ Truck/Tractor 273 Dolly _ Odometer Mileage 2557/3 Check ✓ **Explain any Defects** Engine Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers Rear Vision Mirrors Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: __ Mechanic's Signature

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8277145 Location CES HOUSTON, TX Truck/Tractor_______ Dolly _ Trailer #2 Odometer Mileage 256 330 Check ✓ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers **Rear Vision Mirrors** Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature **Defects Corrected** Defects do not need to be corrected for safe operation Certified by: _ Mechanic's Signature WHITE - MAINTENANCE CANARY - DRIVER REVIEW Reviewing Driver's Signature

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Location CES HOUSTON, 7X	Date 8/31/06 8277146
Truck/Tractor_273	Trailer #1 218
Dolly	Trailer #2
Odometer Mileage 256474	
	lain any Defects
Engine	
Transmission	
Clutch	
Steering Mechanism	
Horn	
Windshield Wipers/Washers	
Rear Vision Mirrors	
Lighting Devices and Reflectors	
Parking Brake	
Service Brakes	
Air Lines/Light Lines	
Coupling Devices	
Tires	
Wheels and Rims	
Emergency Equipment	
/ Other	
Vehicle condition OK	AH.
(This must be checked if there are no defects)	Reporting Driver's Signature
Defects do not need to Defec	ets Corrected
be corrected for safe operation Certif	ied by:
	Mechanic's Signature
-20	Serving 1
Reviewing Driver's Signature	WHITE - MAINTENANCE CANARY - DRIVER REVIEW
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Location CES HOUSTON, TX Date 9/01/06 Truck/Tractor 273 Dolly_ Trailer #2 256631 Odometer Mileage _ Check ✓ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers Rear Vision Mirrors Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if Reporting Driver's Signature there are no defects) Defects do not need to **Defects Corrected** be corrected for safe Certified by: _ operation Mechanic's Signature WHITE - MAINTENANCE CANARY - DRIVER REVIEW Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., Neenah, WI • USA • (800) 327-6868 • Printed in the United States

Location CES Houston, Tx  Truck/Tractor 273		TX	Date 9/5/06 82771			
Dolly			Trailer #2			
	Mileage <u> </u>	29				
Check ✓			in any Defects	6		
	Engine					
	Transmission					
	Clutch					
	Steering Mechanism					
	Horn		<del></del>			
	Windshield Wipers/W	ashers				
	Rear Vision Mirrors					
	Lighting Devices and	Reflectors		100		
Parking Brake Service Brakes						
	Air Lines/Light Lines					
	Coupling Devices					
	Tires					
	Wheels and Rims					
	Emergency Equipmer	nt				
1	Other					
This	cle condition OK must be checked if are no defects)		Reporting Dri	ver's Sign	ature	
1 1	cts do not need to prrected for safe ation	Defects Certifie	d by:	/Jechanic'	s Signature	
•	g Driver's Signature Copyright 1998 J. J. KELLER & ASS	OCIATES, INC., Nee		1 012	WHITE - MAIN CANARY - DRIVE	ITENANCE R REVIEW

Location CES Houston, TX  Truck/Tractor 273	Date 9/7/06 8277149
Truck/Tractor <u>273</u>	Trailer #1
Dolly	Trailer #2 250
Odometer Mileage <u>257675</u>	
	Explain any Defects
Engine	
Transmission	
Clutch	
Steering Mechanism	
Horn	
Windshield Wipers/Washers	
Rear Vision Mirrors	
Lighting Devices and Reflect	ors
Parking Brake	
Service Brakes	
Air Lines/Light Lines	
Coupling Devices	
Tires	
Wheels and Rims	
Emergency Equipment	
Other	
Vehicle condition OK (This must be checked if	Sto
there are no defects)	Reporting Driver's Signature
be corrected for safe	efects Corrected
operation C	ertified by:Mechanic's Signature
Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, I	WHITE - MAINTENANCE CANARY - DRIVER REVIEW NC., Neenah, WI • USA • (800) 327-6868 • Printed in the United States

Location CES HOUSTON, TX  Truck/Tractor 273	Date 9/8/06	8277150
Truck/Tractor 273	Trailer #1 251	
Dolly	Trailer #2 1364	
Odometer Mileage		
Check ✓ Exp	lain any Defects	
Engine		
Transmission		
Clutch		
Steering Mechanism		
Horn		
Windshield Wipers/Washers		
Rear Vision Mirrors		
Lighting Devices and Reflectors		
Parking Brake		
Service Brakes		
Air Lines/Light Lines		
Coupling Devices		
Tires		
Wheels and Rims		
Emergency Equipment		
Other		
Vehicle condition OK (This must be checked if there are no defects)	Reporting Driver's Sign	ature
be corrected for safe	ts Corrected ed by:	s Signature
Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., N	eenah, WI • USA • (800) 327-6868 • Printed	WHITE - MAINTENANCE CANARY - DRIVER REVIEW in the United States

ocation CES Hous Fow, Tx ruck/Tractor_37.3  olly  dometer Mileage _357.893	
	olain any Defects
Engine	
Transmission	
Clutch	
Steering Mechanism	
Horn	
Windshield Wipers/Washers	
Rear Vision Mirrors	
Lighting Devices and Reflectors	
Parking Brake	
Service Brakes	
Air Lines/Light Lines	
Coupling Devices	
Tires	
Wheels and Rims	
Emergency Equipment	
Other	
Vehicle condition OK (This must be checked if there are no defects)	Reporting Driver's Signature
be corrected for safe	cts Corrected fied by: Mechanic's Signature
eviewing Driver's Signature	WHITE - MAINTENANC CANARY - DRIVER REVIEV

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Dolly	CES HOUSTON, TX ctor 273	Date 9/11/ Trailer #1	953	8277152
	Mileage 257926			
Check ✓		lain any Defect	S	
	Engine			
	Transmission			
	Clutch			
	Steering Mechanism			
	Horn			
	Windshield Wipers/Washers			
	Rear Vision Mirrors	<u>.</u>		the delication of the second o
	Lighting Devices and Reflectors			
	Parking Brake			
	Service Brakes		*	
	Air Lines/Light Lines			
	Coupling Devices			
	Tires			
	Wheels and Rims			
	Emergency Equipment			
	Other			
(This	cle condition OK must be checked if are no defects)	Reporting Dr	iver's Sign	ature
1 1	prrected for safe	ts Corrected	Mechanic's	s Signature
_	g Driver's Signature Copyright 1998 J. J. KELLER & ASSOCIATES, INC., N	eenah, WI • USA • (800) 32	27-6868 • Printed	WHITE - MAINTENANCE CANARY - DRIVER REVIEW in the United States

Location CES HOUSTON, TX Date 9/12/06 8277153 Truck/Tractor <u>27</u> Dolly_ Trailer #2 Odometer Mileage 258244 **Explain any Defects** Check √ **Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers **Rear Vision Mirrors** Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: _ Mechanic's Signature WHITE - MAINTENANCE CANARY - DRIVER REVIEW Reviewing Driver's Signature

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**3** 

#### DRIVER'S VEHICLE INSPECTION REPORT Completion of this report required by Federal Law 49 CFR 396.11 & 396.13

Location CES HOUSTON, Tx Date 9/13/06 8277154 Truck/Tractor_273 Trailer #1_2 Dolly _ Trailer #2 Odometer Mileage 258479 Check √ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers **Rear Vision Mirrors** Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: _ Mechanic's Signature WHITE - MAINTENANCE CANARY - DRIVER REVIEW Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., Neenah, WI • USA • (800) 327-6868 • Printed in the United States

HOUSTON, TX Date 9/14/06 Truck/Tractor_ Dolly _ Trailer #2. Odometer Mileage 258 763 Check ✓ **Explain any Defects Engine** Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers **Rear Vision Mirrors** Lighting Devices and Reflectors Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: __ Mechanic's Signature WHITE - MAINTENANCE CANARY - DRIVER REVIEW Reviewing Driver's Signature

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Maria and A

Location 🚨	ES Houston,TX	Date 9/15	100	8277156
Truck/Tract		Trailer #1	251	
Dolly		Trailer #2		
Odometer N	Mileage <u>258897</u>			
Check ✓		ain any Defec	ts	
E	Engine			
	ransmission			
	Clutch			
S	Steering Mechanism			
H	Horn			
V	Vindshield Wipers/Washers			
F	Rear Vision Mirrors			
L	ighting Devices and Reflectors			
F	Parking Brake			
S	Service Brakes			
A	Air Lines/Light Lines			
	Coupling Devices			
Т	Tires			
v	Wheels and Rims			
E	Emergency Equipment		<u>.                                    </u>	
,, (	Other			
This m) لـــّــا	e condition OK nust be checked if tre no defects)	Reporting D	river's Sign	ature
1	rected for safe	ts Corrected	Mechanic's	s Signature
- H	date see what it is a second or in the second of the secon			WHITE - MAINTENANCE
U	<b>Driver's Signature</b> Ropyright 1998 J. J. KELLER & ASSOCIATES, INC., No	eenah, WI • USA • (800)	327-6868 • Printed	CANARY - DRIVER REVIEW

Barre C.

8277157 Housson, TX Date 9/16/06 Truck/Tractor_273 Dolly _ Trailer #2. Odometer Mileage 25916/ Check ✓ **Explain any Defects** Engine Transmission Clutch Steering Mechanism Horn Windshield Wipers/Washers Rear Vision Mirrors **Lighting Devices and Reflectors** Parking Brake Service Brakes Air Lines/Light Lines **Coupling Devices** Tires Wheels and Rims **Emergency Equipment** Other Vehicle condition OK (This must be checked if there are no defects) Reporting Driver's Signature Defects do not need to **Defects Corrected** be corrected for safe operation Certified by: . Mechanic's Signature WHITE - MAINTENANCE CANARY - DRIVER REVIEW Reviewing Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., Neenah, WI • USA • (800) 327-6868 • Printed in the United States

# 15 mm

Location	CES Houston, TX 0	Pate 9/18/06	8277158
Truck/Tra	ヘコフ	railer #1	
Dolly		railer #2	
Odomete	er Mileage <u>259263</u>		
Check /		n any Defects	
****	Engine		·
	Transmission		
	Clutch		
	Steering Mechanism		
	Horn		
	Windshield Wipers/Washers		
	Rear Vision Mirrors		
	Lighting Devices and Reflectors		
	Parking Brake		
	Service Brakes Front she	oe brakes are w	ormout need to
	Air Lines/Light Linese Ceptaced	<u> </u>	
	Coupling Devices		
	Tires		
	Wheels and Rims		
	Emergency Equipment		
	Other		
(This	nicle condition OK is must be checked if re are no defects)	Reporting Driver's Sign	ature
└── be c	ects do not need to Defects of Corrected for safe eration Certified		s Signature
14			MAINTE MAINTENANCE
	ng Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC., Neena	th, WI • USA • (800) 327-6868 • Printed	WHITE - MAINTENANCE CANARY - DRIVER REVIEW in the United States

Com. Sect

Location .	CES HOUSTON TX	Date 9/19/06 8277159
: Truck/Tra	actor <u>973</u>	Trailer #1
Dolly		Trailer #2 2815 mutlock
Odomete	r Mileage <u>2595/5</u>	
Check ✓		plain any Defects
	Engine	
	Transmission	
	Clutch	
	Steering Mechanism	
	Horn	
	Windshield Wipers/Washers	
	Rear Vision Mirrors	
	Lighting Devices and Reflectors	
	Parking Brake	
	Service Brakes	
	Air Lines/Light Lines	
	Coupling Devices	
	Tires	
	Wheels and Rims	
	Emergency Equipment	
	Other	
(This	cle condition OK s must be checked if e are no defects)	Reporting Driver's Signature
☐ be co	orrected for safe	cts Corrected  fied by:
	g Driver's Signature © Copyright 1998 J. J. KELLER & ASSOCIATES, INC.,	WHITE - MAINTENANCE CANARY - DRIVER REVIEW Neenah, WI • USA • (800) 327-6868 • Printed in the United States

Coly



January 26, 2009

Ms. Jill Parks
Air Permits Division MC-163
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
12100 Park 35 Circle
Austin, Texas 78753

LONE STAR AIRBILL NUMBER P2687586

Reference:

Air Permit Application Supplemental Information

Permit No. 86587

Port Arthur Chemical & Environmental Services, LLC

2420 Highway 87 South

Port Arthur, Jefferson County, Texas 77640

Dear Ms. Parks:

On behalf of Port Arthur Chemical & Environmental Services, LLC, please find enclosed the supplemental information to the previous permit application dated November 12, 2008. Specifically, this document addresses the addition of feed storage and process tanks. Updated forms and application text are included in this submission.

If you have questions regarding this application, or require further information, please do not hesitate to contact Mr. Matt Bowman at (713) 676-1460, or me directly at (281) 446-7070.

Sincerely,

Philip B. Evans

Director, Technical Services

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**Enclosure** 

cc: M. Bowman

H. Ross - TCEQ Region 10

# PERMIT APPLICATION SUPPLEMENTAL INFORMATION FOR SODIUM HYDROSULFIDE PRODUCTION PERMIT NO. 86587

Prepared for PORT ARTHUR CHEMICAL & ENVIRONMENTAL SERVICES, LLC Port Arthur, Jefferson County, Texas

Prepared by THE WCM GROUP, INC. Humble, Texas

January 2009

# PERMIT APPLICATION SUPPLEMENTAL INFORMATION FOR SODIUM HYDROSULFIDE PRODUCTION PERMIT NO. 86587

Prepared for
PORT ARTHUR CHEMICAL &
ENVIRONMENTAL SERVICES, LLC
Port Arthur, Jefferson County, Texas

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2.0	PROCESS DESCRIPTION	2
3.0	EMISSIONS SUMMARY	5
4.0	IMPACTS ANALYSIS	6

#### **ATTACHMENTS**

A - EMISSION CALCULATIONS

B - MODELING IMPACTS; SCREEN3 MODEL RUNS

C - ANALYTICAL REPORT

#### **FORMS AND TABLES**

TABLE 1 (a)

TCEQ TABLE 2

#### **FIGURES**

2 - EQUIPMENT LAYOUT

3 - PROCESS FLOW DIAGRAM

#### 1.0 INTRODUCTION

Port Arthur Chemical & Environmental Services, LLC intends to construct and operate equipment for use in the batch production of sodium hydrosulfide (NaSH) on a property located at 2420 Gulfway Drive south of Port Arthur in Jefferson County, Texas. This document is being submitted as a supplement to the previous permit application dated November 12, 2008. The assigned permit number is 86587. Specifically, this document addresses the addition of feed storage and a second production train to the NaSH production unit described in the previous application.

The production process involves the initial oxidation and acidification of an aqueous feed stream composed of dissolved sodium salts and sulfurized isobutylene oil. The reaction overhead is then routed via closed system to a sodium hydroxide solution where it is further reacted to produce the NaSH solution. The product is loaded into tank trucks or isocontainers and shipped off-site. Operational details are found in the Process Description section of this registration.

The facility is located in the Beaumont/Port Arthur ozone nonattainment area and will be classified as a minor source for emissions of Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO_X). The emissions associated with this project are calculated as 8.72 tons per year of VOC and 1.68 tons per year of NO_X. Emission calculations are provided in Attachment A. Federal nonattainment and PSD program requirements do not apply. Texas Commission on Environmental Quality (TCEQ) Table 1(a) and Table 2 are provided as replacement forms. In addition, replacement facility site map and process flow diagrams are provided.

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### 2.0 PROCESS DESCRIPTION

### **NORMAL OPERATION**

An aqueous feed stream composed of dissolved sodium salts (sodium sulfide, sodium hydrosulfide, sodium hydroxide, sodium carbonate) and sulfurized isobutylene with miscellaneous sulfur compounds is delivered to the facility in tank trucks or isocontainers by barge. The feed is batch transferred from the shipping container into a closed 45,000-gallon mix reactor vessel (T1) or (T1A) using a tank-to-tank vapor exchange. The material may also be routed through a 14,000-gallon oil/water separator (T9) to remove residual oil as needed prior to processing. The mix reactor contents can also be circulated through the oil\ water separator as needed. There are two 20,000-gallon storage tanks (T14, T15) for additional feedstock storage.

A 30% solution of hydrogen peroxide is transferred from a 7,000-gallon fixed roof tank (T2) to a smaller 500-gallon dilution vessel (T3) where it is diluted to a 10% solution. The dilute hydrogen peroxide is introduced into the mix reactor to oxidize the residual SIB oil. Sulfuric acid is then added from a 10,000-gallon fixed roof tank (T4) to react with the caustic sodium salts, maintaining the solution at pH 4. The reaction overhead flows from the mix vessel through a closed 6,000-gallon liquid collection (knock out) vessel (T6) or (T6A) and on to a second 6,000-gallon vessel (T7) or (T7A) containing a strong caustic solution (35% sodium hydroxide) for conversion to the NaSH product. The process vents to a caustic scrubber and then to a flare (FL1) to control any non-reacted sulfidic vapors. The caustic solution is supplied from an 8,000-gallon fixed roof tank (T-5). The aqueous sodium hydrosulfide product is transferred directly from the product collection tank (T7) or (T7A) into tank trucks or isocontainers and shipped off-site to the customer. Process wastewater solutions remaining in the mix reactor (T1) or (T1A) and collected in the overflow vessel (T6) or (T6A) are transferred to a 39,000-gallon wastewater tank (T8) for storage prior to off-site shipment. The wastewater is an aqueous solution of inorganic reaction salts.

The flare (FL1) is a three (3) inch diameter forty (40) foot tall, air assisted smokeless gas flare equipped with supplemental fuel system and a continuously burning pilot. The pilot gas and supplemental fuel are propose supplied from a horizontal pressure storage vessel (T10). In addition to residual un-reacted overheads, the flare is used to control displacement losses from the oil/water separator vessel (T9) while the batch process is operating. When the batch process is not operated, collected oil is transferred to tank trucks or isocontainers for off-site shipment. Vapor balance is employed during this transfer to minimize emissions.

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### **MAINTENANCE OPERATION**

As described, the process is batch in nature so emissions associated with the vessel charges (startup) are already addressed as part of normal operations. However, it is periodically necessary to empty and degass the process vessels to facilitate removal of reaction salts or sludge. The vessels (T1 / T1A, T6 / T6A, T7 / T7A) are degassed to the existing flare before cleaning. It is anticipated that this maintenance activity could occur on a quarterly basis. The vacuum truck used to remove the sludge material is connected to the flare system for volatile control during the process. Emission estimates are included in Attachment A.

### **EQUIPMENT LIST**

FIN	Description	Project Use
T1	45,000-gal capacity horizontal tank	Reactor Vessel
T1A	45,000-gal capacity horizontal tank	Reactor Vessel
T2	7,000-gal capacity Horz Fixed Roof Tank	30% Hydrogen Peroxide Storage
Т3	550-gal capacity Vert Fixed Roof Tank	10% Hydrogen Peroxide Storage
T4	10,000-gal capacity horizontal tank	Sulfuric Acid Storage
T5	8,000-gal capacity horizontal tank	Sodium Hydroxide Storage
Т6	6,000-gal capacity Vert Fixed Roof Tank	Liquid Collection Tank
T6A	6,000-gal capacity Vert Fixed Roof Tank	Liquid Collection Tank
Т7	6,000-gal capacity Vert Fixed Roof Tank	NASH Tank
T7A	6,000-gal capacity Vert Fixed Roof Tank	NASH Tank
Т8	39,000-gal capacity horizontal tank	Wastewater Storage
T15	20,000-gal capacity horizontal tank	Feedstock Storage
T16	20,000-gal capacity horizontal tank	Feedstock Storage
Т9	Oil water separator	Oil Separation And Storage
TTL	Tank Truck/Isocontainer loading/unloading	Material Loading/Unloading
N/A	Caustic scrubber	Vent Control
FL1	Flare	Vent Control
T10	Horizontal Pressure Storage Tank	Propane (LPG) Fuel Storage

### 3.0 EMISSIONS SUMMARY

Emissions associated with the project include those generated from storage, processing, and transfer operations, as well as from potential fugitive equipment and piping component leaks. Displacement losses from material transfers are minimized using vapor balance. The reaction overhead composed of sulfidic vapors (primarily hydrogen sulfide) generated in the mix reactor (T1) or (T1A) flows through a closed vent system into the NaSH production vessel (T7) or (T7A) where it is converted to the product by reaction with caustic solution. There is no intermediate storage or handling of the overhead stream between the point of generation and the point of conversion. The only emissions are potential fugitive piping leaks. The vent from the NaSH production vessel is routed through an abatement train consisting of a caustic scrubber and flare to control any non-reacted sulfides. Analytical data provided in Attachment C speciated the sulfur compounds in the vapor space.

Fugitive emissions from potential leaks at valves, pumps, connections and other equipment associated with this project are calculated using the methods and emission factors specified in the TCEQ document "Air Permit Technical Guidance for Chemical Sources: Equipment Leak Fugitives". No reduction credit is taken for inspection program.

Emissions also include those associated with periodic maintenance activities that are planned or anticipated to ensure efficient operations.

### **Emission Summary**

Pollutant	TPY
VOC	8.72
NO _X	1.68
СО	0.76
SO ₂	0.63

### 4.0 IMPACTS ANALYSIS

The emissions generated from the production of sodium hydrosulfide were evaluated for their potential short-term off-property impacts using the results of generic dispersion modeling generated from the EPA approved SCREEN3 model software. Potential impacts for each chemical were determined by multiplying the ratio of the calculated chemical emission rate and the modeled generic emission rate (1.0 g/sec) with the modeled generic concentration for each source, in accordance with the following formula:

Controlled:

(C/G)xF

Uncontrolled:

 $(C/G) \times W)$ 

where:

C = calculated compound emission (g/sec)

G = Modeled generic emission rate (1.0 g/sec)

W = Max. off-site generic building concentration (ug/m3)

F = Max. off-site generic flare concentration (ug/m3)

The resulting concentration for each compound was then compared to its 30-minute TCEQ ESL to determine the acceptability of its estimated impact. The ESLs used to determine the impacts were obtained from the TCEQ published ESL list or where indicated from specific TCEQ regulations or the National Ambient Air Quality Standards.

The modeling evaluation impact summary and the SCREEN3 model runs for routine and MSS emissions are found in Attachment B.

# ATTACHMENT A EMISSION CALCULATIONS

## PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC SUMMARY OF EMISSIONS

EPN PA1: Process Building East End

	Storage	/ Process	Fugitives		To	otal	
Chemical	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	
Sodium Sulfide	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Sodium Carbonate	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	[
Hydrogen Peroxide	0.0149	0.1466	0.0003	0.0013	0.0152	0.1479	}
Sulfuric Acid	0.0000	0.0000			0.0000	0.0000	
Sodium Hydroxide	0.0000	0.0046			0.0000	0.0046	
Hydrogen Sulfide			0.0034	0.0147	0.0034	0.0147	]
Sodium Hydrosulfide			0.0002	0.0008	0.0002	0.0008	
SIB Oil			0.0184	0.0805	0.0184	0.0805	voc
Recovered Oil			0.0000	0.0001	0.0000	0.0001	voc
					0.0184	0.0806	VOC
					0.0188	0.1681	non-VO

### EPN FL1 : Flare East End

	Storage	/ Process	Loa	ding	To	tal	
Chemical	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	
SIB Oil	0.0496	2.4140			0.0496	2.4140	
Sodium Hydrosulfide	0.0099	0.8244	0.0018	0.0049	0.0116	0.8292	
Recovered Oil	0.0011	0.0842	0.0004	0.0010	0.0015	0.0852	
Salts	0.0102	0.8451	0.0036	0.0100	0.0138	0.8551	
					0.0254	1.6843	non-VOC
Carbon Disulfide					0.0078	0.0342	
Carbonyl Sulfide					0.0010	0.0045	
Diethyl Disulfide					0.0146	0.0640	
Dimethyl Disulfide					0.0386	0.1691	
Ethyl Isopropyl Disulfide					0.0128	0.0562	
Ethyl Mercaptan					0.0011	0.0046	
Ethyl Methyl Disulfide					0.0647	0.2834	
Hydrogen Sulfide			- 46		0.0285	0.1249	
Methyl Isopropyl Disulfide					0.0026	0.0112	
Methyl Mercaptan					0.0025	0.0108	
Tert-Butyl Mercaptan					0.0015	0.0067	_
					0.1757	0.7696	Sulfur

### **Combustion Products**

nitrogen oxides	0.3831	1.6781	NOX
carbon monoxide	0.7649	0.7649	со
Propane	1.3843	6.0632	VOC
sulfur dioxide	0.1438	0.6300	SO2

FLARE

1.4354	8.6430	VOC
1.4538	8.7236	VOC TOTAL

MSS

TPY

0.0009

0.0005

lb/hr

0.4346

0.2476

### PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC TANK EMISSION CALCULATIONS

TANK EMISSION CALCULATIONS				<del>,                                    </del>		<del></del>	<del></del> _	,
	Tank ID: chemical	T1 SIB Oil	T1A SIB Oil	T2 30%	T3 10%	T4	Т5	Т6
				Hydrogen	Hydrogen	Sulfuric	Sodium	Sodium
	Material:	Feedstock	Feedstock	Peroxide	Peroxide	Acid	Hvdroxide	Hydrosulfide
Annual Throughput, gal/yr	Q =	14,560,000	14,560,000	2,773,333	8,320,000	2,080,000	2,080,000	8,736,000
Max Hourly Transfer Rate, gal/hr	FR =	4,000	4,000	4,000	500	500	500	1,400
Emissions:		4,000	1,000	",555	000	""		',,,,,,,
Maximum Hourly Emissions, lb/hr	Lmax =	0.02480	0.02480	0.00000	0.15888	0.00002	0.00003	0.00246
Total Annual Emissions, TPY	Lt =	1.20699	1.20699	0.27405	0.72677	0.00001	0.00461	0.20609
Annual Average Hourly Emis, lb/hr	Lavg =	0.276	0.276	0.063	0.166	0.000	0.00105	0.047
Standing loss, lb/yr	Ls =	7.334	7.334	17.972	0.854	0.002	0.106	2.167
Working loss, lb/yr	Lw =	2406.645	2406.645	530.124	1452.685	0.023	9.104	410.011
Material Properties:				i i				
Molecular Weight, lb/lb-mole	Mv =	18.00	18.00	20.80	18.83	98.07	0.58	18.00
Vapor Pressure @ Tla, psia	Pva =	0.39	0.39	0.39	0.39	0.00	0.32	0.11
Vapor Pressure @ Tln, psia	Pvn≖	0.33	0.33	0.32	0.33	0.00	0.27	0.09
Vapor Pressure @ Tlx, psia	Pvx =	0.46	0.46	0.46	0.46	0.00	0.38	0.13
Max. Vapor Pressure @ mTlx, psia	Pvmax =	0.72	0.72	0.65	0.71	0.00	0.00	0.21
Tank Properties:								
Vapor control device		flare	flare	vapor balance	none	none	none	flare
Vapor control efficiency, %	e =	98	98	100	0	0	0	98
Capacity volume, gal	Cv =	47,966	47,966	8,812	547	15,039	13,535	6,016
Shell Diameter, ft	D =	10.8	10.8	10.0	4.5	8.0	8.0	8.0
Shell Height/Length, ft	Hs =	70.0	70.0	15.0	4.6	40.0	36.0	16.0
Tank Orientation (vertical or horizontal)		horiz	horiz	horiz	vert	horiz	horiz	vert
Roof type (cone or dome)		N/A	N/A	N/A	cone	N/A	N/A	cone
Tank Color (white, light gray, other)		white	white	white	white	white	white	white
Solor absorbance factor	a =	0.17	0.17	0.17	0.17	0.17	0.17	0.17 0
Pressure vent setting, psig	Pbp =	0.3	0.3	0 0	0 0	0	0.3 -0.3	
Vacuum vent setting, psia	Pbv = De =	-0.3 10.8	-0.3	13.8	4.5	20.2	19.2	8.0
Effective diameter, ft Avg. Liquid Height, ft	HI=	35.0	10.8 35.0	5.0	2.3	4.0	4.0	8.0
Max. Liquid Height, ft	HIX =	70.0	70.0	10.0	4.6	8.0	8.0	16.0
Roof Outage, ft	Hro =	0.00	0.00	0.00	0.05	0.00	0.00	0.08
Vapor Space Outage, ft	Hvo =	35.00	35.00	5.00	2.35	4.00	4.00	8.08
Vapor space volume, ft ³	Vv =	3206.31	3206.31	750.38	37.33	1280.65	1152.58	406.31
Operating Conditions (Houston, Tx):	,,,	0200.01	5200.01	700.00	07.00	1200.00	1.02.00	
Atmospheric pressure, psia	Pa =	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Annual Avg. Daily solar insulation factor, Btu/ft^2 day	] =	1351	1351	1351	1351	1351	1351	1351
Annual Avg. Daily max. ambient temp, R	Tax =	539.1	539.1	539.1	539.1	539.1	539.1	539.1
Annual Avg. Daily min. ambient temp, R	Tan =	517.4	517.4	517.4	517.4	517.4	517.4	517.4
Annual Avg. Daily vapor temp. range, R	^Tv =	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Annual Daily avg. liquid surface temp, R	Tla =	530.1	530.1	530.1	530.1	530.1	520.0	530.1
Annual Avg. Daily min. liquid surface temp., R	Tin =	524.6	524.6	524.6	524.6	524.6	515.0	524.6
Annual Avg. Daily max. liquid surface temp., R	Tlx =	535.6	535.6	535.6	535.6	535.6	525.0	535.6
Highest Month Daily solar insulation factor, Btu/ft^2 day		1898	1898	1898	1898	1898	1898	1898
Highest Month Daily max. ambient temp, R	mTax =	553.6	553.6	553.6	553.6	553.6	553.6	553.6
Highest Month Daily min. ambient temp, R	mTan =	532.5	532.5	532.5	532.5	532.5	532.5	532.5
Highest Month Daily vapor temp. range, R	m^Tv =	24.2	24.2	24.2	24.2	24.2	24.2	24.2
Highest Month Daily max. liquid surface temp., R	mTlx =	551.7	551.7	551.7	551.7	551.7	525.0	551.7
Gas Constant, psia-ft^3/lb mole-R	R =	10.73	10.73	10.73	10.73	10.73	10.73	10.73
Vapor Density, lb/ft ³	Wv =	0.001	0.001	0.001	0.001	0.000	0.000	0.000
Daily vapor pressure range, psia	^Pv =	0.131	0.131	0.138	0.134	0.000	0.108	0.037
Vapor space expansion factor	Ke =	0.009	0.009	0.051	0.051	0.042	0.008	0.044
Vented vapor saturation factor	Ks =	0.583	0.583	0.907	0.954	1.000	0.937	0.955
Working Loss Product Factor	Kp =	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turnovers	N =	303.55	303.55	314.72 1.00	15203.69	138.30	153.67	1452.18
Turnover factor	Kn = Days =	1.00 365	1.00 365	365	1.00 365	1.00 365	1.00 365	1.00 365
Operating Days, days/yr	Days =	300		L 303	300	305	303	303

### PORT ARTHUR CHEMICAL AND ENVIRONMENTAL

TANK EMISSION CALCULATIONS

TANK EMISSION CALCULATIONS				ı			Τ	I
	Tank ID: chemical	T6A	<b>T</b> 7	T7A	T14	T15	T8 Salts	<b>T9</b> Recovered Oi
A sout Thomas and a site		Sodium Hydrosulfide	Sodium Hydrosulfide 8,736,000	Sodium Hydrosulfide 8,736,000	Feedstock storage 7,280,000	Feedstock storage 7,280,000	Wastewater	Separator 873,600
Annual Throughput, gal/yr Max Hourly Transfer Rate, gal/hr	Q = FR =	8,736,000 1,400	1,400	1,400	14,000	14,000	1,867	140
Emissions:								ł
Maximum Hourly Emissions, lb/hr	Lmax =	0.00246	0.00246	0.00246	4.33963	4.33963	0.01016	0.00109
Total Annual Emissions, TPY	Lt =	0.20609	0.20609	0.20609	0.60166	0.60166	0.84511	0.08424
Annual Average Hourly Emis, lb/hr	Lavg =	0.047	0.047	0.047	0.137	0.137	0.193	0.019
Standing loss, lb/yr	Ls =	2.167	2.167	2.167	0.000	0.000	0.000	0.000
Working loss, lb/yr	Lw =	410.011	410.011	410.011	1203.322	1203.322	1690.211	168.475
Material Properties:							40.00	450.00
Molecular Weight, lb/lb-mole	Mv =	18.00	18.00	18.00	18.00	18.00	18.00	150.00
Vapor Pressure @ Tla, psia	Pva =	0.11	0.11	0.11	0.39	0.39	0.34	0.05
Vapor Pressure @ Tln, psia	Pvn =	0.09	0.09	0.09	0.33	0.33	0.29	0.04
Vapor Pressure @ Tlx, psia	Pvx =	0.13	0.13	0.13	0.46	0.46	0.40 0.63	0.07 0.11
Max. Vapor Pressure @ mTlx, psia	Pvmax =	0.21	0.21	0.21	0.72	0.72	0.03	0.11
Tank Properties:		floro	floro	flare	none	none	flare	flare
Vapor control device		flare 98	flare 98	11are 98	none 0	none ı 0	98	98
Vapor control efficiency, %	e = Cv =	6,016	6,016	6,016	26,437	26,437	41,123	14,099
Capacity volume, gal Shell Diameter, ft	CV = D =	8.0	8.0	8.0	10.0	10.0	10.0	10.0
Shell Height/Length, ft	Hs =	16.0	16.0	16.0	45.0	45.0	70.0	24.0
Tank Orientation (vertical or horizontal)	115 -	vert	vert	vert	horiz	horiz	horiz	vert
Roof type (cone or dome)		cone	cone	cone	N/A	N/A	N/A	cone
Tank Color (white, light gray, other)		white	white	white	white	white	white	white
Solor absorbance factor	a =	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Pressure vent setting, psig	Pbp =	0	0	0	0	0	O	0
Vacuum vent setting, psia	Pbv =	0	0	0	0	0	0	0
Effective diameter, ft	De =	8.0	8.0	8.0	23.9	23.9	29.9	10.0
Avg. Liquid Height, ft	Hi =	8.0	8.0	8.0	5.0	5.0	5.0	12.0
Max. Liquid Height, ft	Hix =	16.0	16.0	16.0	10.0	10.0	10.0	24.0
Roof Outage, ft	Hro =	0.08	0.08	0.08	0.00	0.00	0.00	0.10
Vapor Space Outage, ft	Hvo =	8.08	8.08	8.08	5.00	5.00	5.00	12.10
Vapor space volume, ft ³	Vv =	406.31	406.31	406.31	2251.14	2251.14	3501.78	950.66
Operating Conditions (Houston, Tx):								
Atmospheric pressure, psia	Pa =	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Annual Avg. Daily solar insulation factor, Btu/ft^2 day	l =	1351	1351	1351	1351	1351	1351	1351
Annual Avg. Daily max. ambient temp, R	Tax =	539.1	539.1	539.1	539.1	539.1	539.1	539.1
Annual Avg. Daily min. ambient temp, R	Tan =	517.4	517.4	517.4	517.4	517.4	517.4	517.4
Annual Avg. Daily vapor temp. range, R	^Tv =	22.1	22.1	22.1	22.1	22.1	22.1	22.1
Annual Daily avg. liquid surface temp, R	Tla =	530.1	530.1	530.1	530.1	530.1	530.1	530.1
Annual Avg. Daily min. liquid surface temp., R	Tin =	524.6	524.6	524.6	524.6	524.6	524.6	524.6
Annual Avg. Daily max. liquid surface temp., R	Tlx =	535.6	535.6	535.6	535.6	535.6	535.6	535.6
Highest Month Daily solar insulation factor, Btu/ft^2 da		1898	1898	1898	1898	1898	1898	1898
Highest Month Daily max. ambient temp, R	mTax =	553.6	553.6	553.6	553.6	553.6	553.6	553.6
Highest Month Daily min. ambient temp, R	mTan =	532.5	532.5	532.5	532.5	532.5	532.5 24.2	532.5 24.2
Highest Month Daily vapor temp. range, R	m^Tv =	24.2	24.2	24.2	24.2	24.2	551.7	551.7
Highest Month Daily max. liquid surface temp., R	mTlx =	551.7	551.7	551.7	551.7 10.73	551.7 10.73	10.73	10.73
Gas Constant, psia-ft^3/lb mole-R	R =	10.73	10.73	10.73		l	1	
Vapor Density, lb/ft ³	Wv =	0.000	0.000	0.000	0.001	0.001	0.001	0.001 0.020
Daily vapor pressure range, psia	^Pv =	0.037	0.037	0.037	0.131	0.131	0.115	
Vapor space expansion factor	Ke =	0.044	0.044	0.044	0.051	0.051	0.050 0.918	0.043 0.967
Vented vapor saturation factor	Ks =	0.955	0.955	0.955 1.00	0.907	0.907 1.00	1.00	1.00
Working Loss Product Factor	Kp = N ≃	1.00 1452.18	1.00 1452.18	1.00	1.00 275.38	275.38	283.24	61.96
Turnovers	n ≃ Kn =	1.00	1,00	1.00	1.00	1.00	1.00	1.00
Turnover factor	Days =	365	365	365	365	365	365	365
Operating Days, days/yr	Days =	300	303	300	303	303	1 303	1 300

# EPAHO041000221

# PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC TANK EMISSION CALCULATIONS

			vapor wt			
	lb/hr	TPY	@ Max Hourly	lb/hr	TPY	
T2	0.0000	0.2740	0.2858	0.0000	0.0783	
T3	0.1589	0.7268	0.0940	0.0149	0.0683	
				0.0149	0.1466	TOTAL

# PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC Flare Combustion Calculation

### COMBUSTION

132	112.35	0.33	19.65	scfm				
	vent gas	pilot gas	Propane					
			8.66	ft3/lb				
heat	0	2,316	2,316	Btu/scf				
flow	6,741	20	1,179	scf/hr				
rate	59,051,160	173,448	10,328,040	scf/year				
	Factor			Factor			VOC TPY	VOC lb/hr
	lb/MMBtu	NOx TPY	NOx lb/hr	lb/MMBtu	CO TPY	CO lb/hr	(propane)	(propane)
Vent Gas	0.1380	0.000	0.000	0.2755	0.000	0.000	0.000	0.000
Pilot Gas	0.1380	0.028	0.006	0.2755	0.055	0.013	0.100	0.023
Supplemental Gas	0.1380	1.650	0.377	0.2755	3.295	0.752	5.963	1.361

N/A

3.350

Flare Destruction/Removal Efficiency and Emission Factors are based on TCEQ Technical Guidance for Chemical Sources: Flares and Vapor Oxidizers: RG-109 October 2000 for high Btu non-steam assisted flares.

0.383

#### Pilot Gas Sample calculation:

NOx ton/yr: (2,316 Btu/lb) * (173,448 lb/MMBtu) / 1000000 * (0.1380 lb/yr) / 2000 = 0.028 tpy

NOx lb/hr: (2,316 Btu/lb) * (20 lb/MMBtu) / 1000000 * (0.1380 lb/yr) = 0.006 lb/hr

1.678

Total

N/A

#### **Propane Sample Calculation:**

Propane ton/yr (10.328,040 cf/hr) / (8.66 cf/lb) * (100 - 99) / 100 / 2000 = 5.963 TPYPropane lb/hr (1,179 cf/hr) / (8.66 cf/lb) * (100 - 99) / 100 = 1.361 lb/hr 6.063

0.765

1.384

³ TCEQ Technical Flare Guidance states in Table 4 Flare Factors - PM emission factor is none.

# PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC Flare Emission Calculation

Analytical data indicates the following speciation for tank vapor space.

Calculation Basis:

IDEAL GAS LAW, PV = nRT

where:

P = pressure (psia)

V = volumetric flow rate (scf /min)

R = Universal Gas Constant

T= Temperature

n = no. of moles of gas

then,

 $n = PV/RT * ppm/10^6 * 60$ 

14.7 psia

112.35 scf /min

10.73 psia scf / lb mole R

530.1 R

			lb mole sulfur		controlle	ed 98%
Speciation	MW	ppm	/ hr	lb/hr	lb/hr	TPY compound
Carbon Disulfide	76.131	6	0.00010	0.00796	0.00780	0.0342
Carbonyl sulfide	60.0704	1	0.00002	0.00105	0.00103	0.0045
Diethyl Disulfide	122.243	7	0.00012	0.01491	0.01461	0.0640
Dimethyl Disulfide	94.194	24	0.00042	0.03938	0.03860	0.1691
Ethyl Isopropyl Disulfide	150.31	5	0.00009	0.01309	0.01283	0.0562
Ethyl mercaptan	62.134	1	0.00002	0.00108	0.00106	0.0046
Ethyl Methyl Disulfide	122.25	31	0.00054	0.06602	0.06470	0.2834
Hydrogen sulfide	34.076	1	0.00002	0.00059	0.00058	0.0025
Methyl Isopropyl Disulfide	150.31	1	0.00002	0.00262	0.00257	0.0112
Methyl Mercaptan	48.1026	3	0.00005	0.00251	0.00246	0.0108
Tert-Butyl Mercaptan	90.183	1	0.00002	0.00157	0.00154	0.0067
Unidentified Volatile Sulfur *	34.076	48	0.00084	0.02850	0.02793	0.1223
* as H2S worst case				0.17929	0.17570	0.7696

					100% cor	version
Sulfur Dioxide	64	129	0.00225	0.14383	0.14383	0.6300

Flare combustion converts all sulfur compounds to SO2, conservatively assume 100% conversion.

# EPAHO041000224

## PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC ANTICIPATED MAINTENANCE ACTIVITY

Degassing of reactor vessels for sludge removal.

		Shell	Shell	Calculated	
	TYPE	Diameter	Height/Length	Capacity	
Tank ID	FXR or IFR	(ft)	(ft)	(gal)	
T1	FXR	10.8	70	47,966	SIB mixture
T1A	FXR	10.8	70	47,966	SIB mixture
T6	FXR	8	16	6,016	Sodium Hydrosulfide
T6A	FXR	8	16	6,016	Sodium Hydrosulfide
T7	FXR	8	16	6,016	Sodium Hydrosulfide
T7A	FXR	8	16	6,016	Sodium Hydrosulfide

Tanks are degassed to the flare

Frequency =

events/yr

		Degassing									
	MW	VP	Temp	Flare	Emis	ssions					
Chemical	lb/lb mole	psia	R	%	lb/event	TPY	]				
SIB mixture	18	0.7233	535.6	98	4.3464	0.0087_					
SIB mixture	18	0.7233	535.6	98	4.3464	0.0087					
Only one se	et of tanks at a	time.			0.4346	0.0009	SIB 10%				
Sodium Hydrosulfide	18	0.2054	535.6	98	0.1548	0.0003					
Sodium Hydrosulfide	18	0.2054	535.6	98	0.1548	0.0003					
Sodium Hydrosulfide	18	0.2054	535.6	98	0.1548	0.0003					
Sodium Hydrosulfide	18	0.2054	535.6	98	0.1548	0.0003					
Only one se	et of tanks at a t	time.			0.2476	0.0005	NASH 80%				

# PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC LOADING LOSS EMISSIONS

		T7	T7A	Т8	Т9
	Material:	Sodium Hydrosulfide	Sodium Hydrosulfide	Wastewater	Recovered Oil
	EPN:	LDR-001	LDR-001	LDR-001	LDR-001
Annual Throughput, gai/yr	Th =	8,736,000	8,736,000	11,648,000	873,600
Max Hourly Fill Rate, gal/hr	FR =	1,400	1,400	1,867	140
Emissions:					
Maximum Hourly Emissions, lb/hr	II =	0.0009	0.0009	0.0036	0.0004
Annual Emissions, TPY	LL =	0.0024	0.0024	0.0100	0.0010
LL = [(12.46 x ((S x VPa x MW) / Ta) / 1000) x Th x (  Material Properties:	c/100) x (1-e/100)	)] / 2000			
Molecular Weight, lb/lb-mole	Mv =	18.00	18.00	18.00	150.00
Vapor Pressure @ Tlx, psia	Pvx =	0.13	0.13	0.40	0.07
Vapor Pressure @ Tla, psia	Pva =	0.11	0.11	0.34	0.05
Vapor control device		flare	flare	flare	flare
Capture efficiency, %	C =	100	100	100	100
Vapor control efficiency, %	e =	98	98	98	98
Max Liquid Temp., R	Tlx ≈	551.67	551.67	551.67	551.67
Averag Liquid Temp., R	Tla =	530.08	530.08	530.08	530.08
Saturation Factor	S =	0.6	0.6	0.6	0.6

Loading Sum	TO	ΓAL
EPN	lb/hr	TPY
LDR-001	0.00578	0.0159

## PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC FUGITIVE EMISSION ESTIMATES

		VP	Liquid	Stream Type					Gas/Vapo	Gas/Vapo	or			Total	EMISS	SIONS
MATERIAL	FIN	(psia)	wt frac.	LL,HL,G/V	Valves	lbs/hr	Flanges	lbs/hr	Valves	Flanges	lbs/hr	Pumps	lbs/hr	lb/hr	(lb/hr)	(ton/yr)
SIB oil SIB oil	T1 T1A	0.72327 0.72327	1.0000 1.0000	LL LL	22 22	0.00231 0.00231	98 98	0.00147 0.00147	0	0	0 0	2 2	0.005404 0.005404	0.0092 0.0092	0.0092 0.0092	0.0402 0.0402
Hydrogen peroxide 30%	T2	0.65214	0.3000	LL	2	0.00021	6	0.00009	0	0	0	1	0.002702	0.0009	0.0003	0.0012
Hydrogen peroxide 10%	Т3	0.70865	0.1000	LL	2	0.00021	6	0.00009	0	0	0	1	0.002702	0.0003	0.0000	0.0001
Hydrogen sulfide	to T7		1.0000	G/V	0	0	0	0.00000	1	16	0.001392	0	0	0.0017	0.0017	0.0073
	to T7A		1.0000	G/V	0	0	0	0.00000	1	16	0.001392	0	0	0.0017	0.0017	0.0073
Vent gas	FL1		0.1000	G/V	0	0	0	0.00000	1	50	0.00435	0	0	0.0005	0.0000	0.0002
Recovered Oil	LDR-001	0.10938	0.0500	LL	1	0.000105	6	0.00009	1	0	0	0	0	0.0000	0.0000	0.0000
Sodium Hydrosulfide	LDR-001	0.20537	1.0000	LL	0	0	12	0.00018	0	0	0	0	0	0.0002	0.0002	0.0008
															0.0220	0.0965

	Tota	Total		Tank		Vent		ad
Speciation	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
SIB oil	0.0184	0.0805	0.0184	0.0805				
Recovered Oil	0.0000	0.0001					0.0000	0.0001
Hydrogen peroxide	0.0003	0.0013	0.0003	0.0013				_
Hydrogen sulfide	0.0034	0.0147			0.0034	0.0147		
Sodium Hydrosulfide	0.0002	0.0008		_			0.0002	0.0008
Total	0.0222	0.0974						

Total is multiplied by liquid weight fraction 365 days in service

Monitoring is performed in accordance with TCEQ AVO.

SOCMI Factors	Valves	Flanges	G/V VIv	G/V Fing	Pumps	Relief VIv	Agitator
Light Liquid (LL)	0.0035	0.0005			0.0386		0.0005
Gas / Vapor (G/V)			0.0089	0.0029		0.2293	
Heavy Liquid (HL)	0.0007	0.00007			0.0161		0.00007
LL,G/V - Efficiency (%)	97	97	97	97	93	97	97
HL - Efficiency (%)	0	0	30	30	0	0	0

^{*} Per TCEQ guidance, fugitive emissions are not estimated for materials with vapor pressure < 0.002 psia.

ATTACHMENT B

MODELING IMPACTS

SCREEN3 MODEL RUNS

# PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC MODELING IMPACTS

			Nea	n Off-Property rest Receptor	9,053	ug/m3	105 ft 141 ft	
EPN PA1 : Process Building East End			Maximum Off-Property Nearest Property Line		6,582 ug/m3 5,432 ug/m3		(using 0.6 Area Source Adj. Factor) (using 0.6 Area Source Adj. Factor)	
Chemical	CAS No.	ESL ug/m3	Emiss lb/hr	ion Rates g/sec	Max Off- Property ug/m3	Nearest Receptor ug/m3	Max Off-Property Excedance (No or Yes)	Property Line Excedance (No or Yes)
Sodium Sulfide	1313-82-2	50	0.0000	0.0000	0.0000	0.0000	No	No
Sodium Carbonate	497-19-8	50	0.0000	0.0000	0.0000	0.0000	No	No
Hydrogen Peroxide	772-84-1	14	0.0152	0.0019	12.6172	10.4123	No	No
Sulfuric Acid	7664-93-9	15	0.0000	0.0000	0.0160	0.0132	No	No
Sodium Hydroxide	1310-73-2	20	0.0000	0.0000	0.0223	0.0184	No	No
Hydrogen Sulfide	7783-06-04	167	0.0034	0.0004	2.7863	2.2994	No	No
Sodium Hydrosulfide	16721-80-5	50	0.0002	0.0000	0.1491	0.1230	No	No
SIB Oil	68511-50-2	1400	0.0184	0.0023	15.2130	12.5546	No	No
Recovered Oil	8012-95-1	50	0.0000	0.0000	0.0040	0.0000	No	No

### PORT ARTHUR CHEMICAL AND ENVIRONMENTAL SERVICES, LLC **MODELING IMPACTS**

			Maximum	Off-Property	1,049	ug/m3	250 ft	
EPN FL1 : Flare East End			Nearest	Property Line	869	ug/m3	43 ft	
Chemical	CAS No.	ESL ug/m3	Emiss	sion Rates g/sec	Max Off- Property ug/m3	Nearest Receptor ug/m3	Max Off-Property Excedance (No or Yes)	Property Line Excedance (No or Yes)
Sulfur Dioxide	7446-09-5	838	0.1438	0.0181	18.9856	0.0118	No	No
SIB Oil	68511-50-2	1400	0.0496	0.0062	6.5466	0.0041	No	No
Sodium Hydrosulfide	16721-80-5	50	0.0116	0.0015	1.5345	0.0010	No	No
Recovered Oil	8012-95-1	50	0.0015	0.0002	0.1932	0.0001	No	No
Salts	N/A	N/A	0.0138	0.0017	1.8218	0.0011	No	No
Carbon Disulfide	75-15-0	30	0.0078	0.0010	1.0294	0.0006	No	No
Carbonyl Sulfide	463-58-1	8	0.0010	0.0001	0.1354	0.0001	No	No
Diethyl Disulfide	352-93-2	16	0.0146	0.0018	1.9284	0.0012	No	No
Dimethyl Disulfide	N/A	20	0.0386	0.0049	5.0947	0.0032	No	No
Ethyl Isopropyl Disulfide		10	0.0128	0.0016	1.6937	0.0011	No	No
Ethyl Mercaptan	75-08-1	0.80	0.0011	0.0001	0.1400	0.0001	No	No
Ethyl Methyl Disulfide		10	0.0647	0.0081	8.5407	0.0053	No	No
Hydrogen Sulfide	7783-06-04	167	0.0285	0.0036	3.7629	0.0023	No	No
Methyl Isopropyl Disulfide		10	0.0026	0.0003	0.3387	0.0002	No	No
Methyl Mercaptan	74-93-1	2.0	0.0025	0.0003	0.3252	0.0002	No	No
Tert-Butyl Mercaptan	75-66-1	2.3	0.0015	0.0002	0.2032	0.0001	No	No

#### ESL notes:

For sulfuric acid, 30 TAC 112.41, 15 ug/m3

For sulfur dioxide, 30 TAC 112.3, Jefferson County, ESL is 0.32 ppm or 838.4 ug/m3. For hydrogen sulfide, 30 TAC 112.31, ESL is 0.12 ppm or 166.8 ug/m3 for industrial areas.

For ethyl/methyl isopropyl disulfide and ethyl methyl disulfide, the disulfide default of 10 ug/m3 is used.

#### MSS EMISSIONS

EPN FL1 : Flare East End		)		Off-Property	, , , , ,	ug/m3	250 ft 43 ft	
EFN FL1 . Flate East Elf	CAS	ESL		Property Line on Rates	Max Off- Property	ug/m3 Nearest Receptor	Max Off-Property Excedance	Property Line Excedance
Chemical	No.	ug/m3	lb/hr	g/sec	ug/m3	ug/m3	(No or Yes)	(No or Yes)
SIB Oil	68511-50-2	1400	0.4346	0.0547	57.3723	0.0356	No	No
Sodium Hydrosulfide	16721-80-5	50	0.2476	0.0312	32.6895	0.0203	No	No

# ATTACHMENT C ANALYTICAL REPORT



8210 Mosley Rd. Houston, TX 77075 713 943-9776 Telephone 713 943-3846 Facsimile

### **CORE LABORATORIES**

CLARK HICKMAN CES ENVIRONMENTAL SERVICES 4904 GRIGGS RD HOUSTON, TX 77021

Sample Number:

184168-002

Sample Date:

11/20/08 12:00:00 PM

Date Reported:

11/21/08

Date Received:

11/20/08

Sample ID:

Headspace Storage Tank

Description:

### **Analytical Report**

Test	Result	Units	Method	Date	Analyst
Sulfur Speciation Gas					
Hydragen Sulfide	1	ppm v/v	ASTM D-5504	11/21/08	JВ
Carbonyl Sulfide	1	ppm v/v			
Methyl Mercaptan	3	ppm v/v			
Ethyl Mercaptan	1	ppm v/v			
Dimethyl Sulfide	< 1	ppm v/v			
Carbon Disulfide	6	ppm v/v			
Isopropyl Mercaptan	< 1	ppm v/v			
Ethylene Sulfide	< 1	ppm v/v			
ten-Butyl Mercaptan	1	ppm v/v			
n-Propyl Mercaptan	< 1	ppm v / v			
Ethyl Methyl Sulfide	< 1	ppm v/v			
Propylene Sulfide	< 1	ppm v/v			
Methyl Isopropyl Sulfide	< 1	ppm v / v			
Isobutyl Mercaptan	< 1	ppm v/v	•		
Ethyl Sulfide	< 1	ppm v / v			
n-Butyl Mercaptan	< 1	ppm v/v			
Methyl n-Propyl Sulfide	< 1	ppm v / v			
Methyl t-Butyl Sulfide	. <1	ppm v / v			
Dimethyl Disulfide	24	ppm v / v			
Methyl sec-Butyl Sulfide	< 1	ppm v / v			
Ethyl n-Propyl Sulfide	< 1	ppm v / v			
Diisopropyl Sulfide	< 1	ppm v/v	٠		
Ethyl Methyl Disulfide	31	ppm v / v			
Methyl Isopropyl Disulfide	1	ppm v / v			
Diethyl Disulfide	7	ppm v / v			
Propyl Methyl Disulfide	< 1	ppm v / v			
Methyl tert-Butyl Disulfide	< 1	ppm v / v			

The enalytical results, opinions or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. The analytical results, opinions or interpretations expressed represent the best judgment of Core Laboratories, Core Laboratories, however, makes no warranty or representation, express or implied, of any type, and expressly disclaims same as to the productivity, proper operations or profitableness of any oil, gas, coal, or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever. This report shall not be reproduced, in whole or in part, without the written approval of Core Laboratories.



8210 Mosley Rd. Houston, TX 77075 713 943-9776 Telephone 713 943-3846 Facsimile

### **CORE LABORATORIES**

CLARK HICKMAN
CES ENVIRONMENTAL SERVICES
4904 GRIGGS RD
HOUSTON, TX 77021

Sample Number:

184168-002

Sample Date:

11/20/08 12:00:00 PM

Date Reported:

11/21/08

Date Received:

11/20/08

Sample ID:

Headspace Storage Tank

Description:

### **Analytical Report**

Test	Result	Units	Method	Date	Analyst
Ethyl Isopropyl Disulfide	5	ppm v/v			<del></del>
Methyl sec-Butyl Disulfide	< 1	ppm v/v			
Ethyl Propyl Disulfide	< 1	ppm v/v			
Isopropyl Disulfide	< 1	ppm v/v			
Isopropyl n-Propyl Disulfide	< 1	ppm v/v			
Ethyl sec-Butyl Disulfide	< 1	ppm v/v			
tris-Methylthio-methane	< 1	ppm v / v			
Benzothiophene	< 1	ppm v/v			
Unidentified Volatile Sulfur	48	ppm v/v			

Approved By:

M. Jean Waits
Supervising Chemist

The analytical results, opinions or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. The analytical results, opinions or interpretations expressed represent the best judgment of Core Laboratories. Core Laboratories, however, makes no warranty or representation, express or implied, of any type, and expressly disclaims same as to the productivity, proper operations or profitableness of any oil, gas, coal, or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever. This report shall not be reproduced, in whole or in part, without the written approval of Core Laboratories.





### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

### Table 1(a) Emission Point Summary

Date: January 2009	Permit No.: N/A	Regulated Entity No.: 105156111
Area Name: Port Arthur Chemical & Environmental Services LLC		Customer Reference No.: 603423427

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA							
Emission Point			2. Component or Air Contaminant Name	3. Air Contaminan	t Emission Rate		
(A) EPN	(B) FIN	(C) NAME		(A) Pound Per Hour	(B) TPY		
PA1	PA1	Bldg East	VOC	0.018	0.081		
			Non-VOC	0.019	0.168		
FL1	FL1	East Flare	NOx	0.383	1.678		
	-		СО	0.765	0.765		
			SO2	0.144	0.630		
			VOC	1.435	8.643		
			Non-VOC	0.254	1.684		
			Sulfur Compounds	0.176	0.770		
FL1	FL1	East Flare MSS	VOC	0.435	0.0009		
			Non-VOC	0.248	0.0005		

EPN = Emission Point Number

FIN = Facility Identification Number



### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

### Table 1(a) Emission Point Summary

Date: January 2009	Permit No.: N/A	Regulated Entity No.: 105156111
Area Name: Port Arthur Chemical & Envir	Customer Reference No.: 603423427	

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CO	NTAMIN	ANT DATA				EMISSION POINT DISCHARGE PARAMETERS									
1. Emis	sion Poin	t		rm coord			Source								
			<b>O</b> ]	F EMISSION	N POINT	5.	Building	6.		7. Stack Exit	t Data		8. Fugitiv	es	
(A) EPN	(B) FIN	(C) NAME	Zone	East (Meters)	North (Meters)		Height (ft.)		Above Ground (ft.)	(A) Diameter (ft.)	(B) Velocity (fps)	(C) Temperature (°f)	(A) Length (ft.)	(B) Width (ft.)	(C) Axis Degrees
PA1	PA1	Bldg East	15	406960	3300329	_	N/A		3.5	N/A	N/A	Ambient	110	84	
FL1	FL1	East Flare	15	406981	3300339		30		40	0.333	65.6	1832			
						_	:								

EPN = Emission Point Number FIN = Facility Identification Number

### TABLE 2

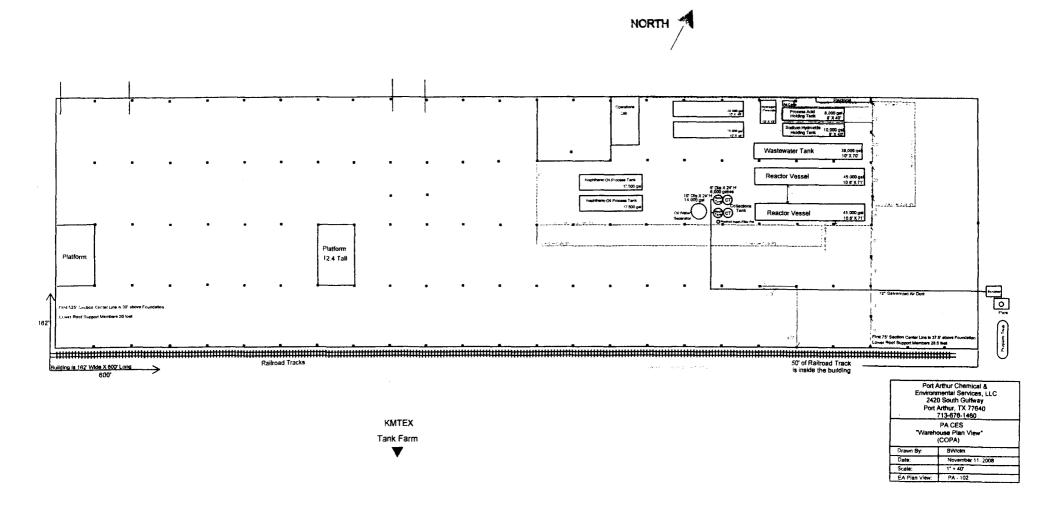
### **MATERIAL BALANCE**

This material balance table is used to quantify possible emissions of air contaminants and special emphasis should be placed on potential air contaminants, for example: If feed contains sulfur, show distribution to all products. Please relate each material (or group of materials) listed to its respective location in the process flow diagram by assigning point numbers (taken from the flow diagram) to each material.

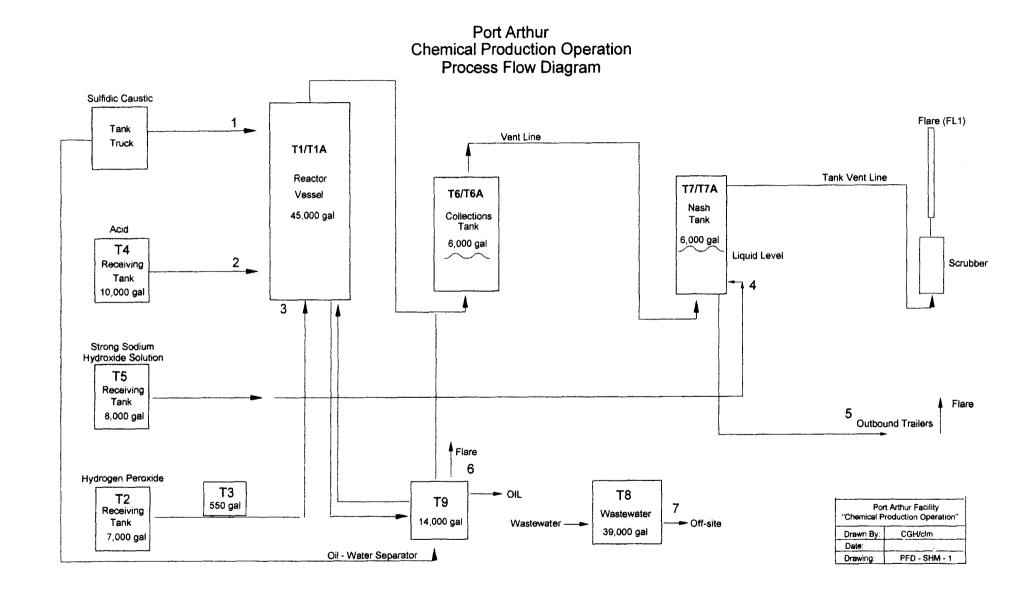
LIST EVERY MATERIAL INVOLVED IN EACH OF THE FOLLOWING GROUPS	Point No. from Flow Diagram	Process Rate (lbs/hr or SCFM) standard conditions: 70°F 14.7 PSIA. Check appropriate column at right for each process.	Measurement	Estimation	Calculation
1. Raw Materials – Input Sulfidic Caustic Sulfuric Acid Hydrogen Peroxide Sodium Hydroxide	1 2 3 4	19,460 2,780 11,120 2,780		X X X	
2. Fuels – Input N/A					
Products & By-Products – Output     Sodium Hydrosulfide     Sib Oil	5 6	11,676 1,168		X X	
4. Solid Wastes – Output  N/A					
5. Liquid Wastes – Output Wastewater	7	15,568		х	
6. Airborne Waste (Solid) – Output N/A					
7. Airborne Wastes (Gaseous) – Output Nitrogen Oxides Carbon Monoxide Sulfur Dioxide Sulfur Compounds Volatile Organics	8	0.38 0.77 0.14 0.18 1.45			×

10/93

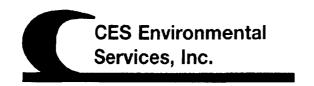
# FIGURE 2 EQUIPMENT LAYOUT



# FIGURE 3 PROCESS FLOW DIAGRAM







### **Material / Product Approval Letter**

Date 1/8/2009

Dear Randy Woolvine

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-2282

**Expiration Date** 7/9/2009

**Producer:** Citgo Refinery

Address: 4401 LA Hwy 108

Lake Charles, LA 70665

Material / Product Information

Name of Material / Product Sulfidic caustic solution

**Container Type:** barge

**Detailed Description of Process Generating or Producing the Material / Product:** 

Merox processing of fuels using caustic to remove sulfides

**Color:** It brown to It red Odor: sulfur smell/H2S smell pH: 10.5-12.4

**Physical State:** 

**Incompatibilities:** MSDS

Safety Related Data/Special Handling:

Normal PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



### **CES Environmental** Services, Inc.

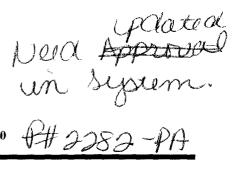
4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021

Fax: (713) 676-1676

http://www.cesenvironmental.com TCEQ Industrial Solid Waste Permit No: 30948

U.S. EPA ID No: TXD008950461

ISWR No: 30900



OFOTION 4: Materia	al Duadona defamati						
	al Producer Informatio	<u>n</u>					
Company:	Citgo Refinery	404   4   1   400		.,			
Address:	4401 LA Hwy 108 4						
City, State, Zip:	Lake Charles LA 706	005			D b		
Contact:	Randy Woolvine			Title :	Purchasin		
Phone No:	(337) 708-6344			Fax:	(337) 708	-6289	
24 / HR Phone :				_			
U.S EPA I.D No :	na			_			
State I.D :	na			SIC Code	na		
SECTION 2: Billing	Information						
Company :	Citgo Accounts Paya	ble					
Address :	P. O. Box 4970						
City, State, Zip:	Houston TX 77210						
Contact :	Randy Woolvine			Title :			
Phone No :	(337) 708-8274		•	Fax:	(337) 708-	-6289	
SECTION 3: Genera	al Description of the M	aterial / Product					
Name of Mateiral	/ Product : Sulfidic ca	austic solution					
Detailed Descript	tion of the Process (	Senerating or Produ	cing the Mater	ial / Produc	:t:		
Merox processing	of fuels using caustic	to remove sulfides					
Physical State :	Liquid	Sludge	Po	wder			
	Solid	Filter Cake	(III) Co	mbination			
Color :		It brown to It red	Odor :			sulfur smell/H2S	smell
Specific Gravity (	Water=1) :	1.03	Density :			8.6-9.2	lbs / gal
Does this material	contain any total phen	olic compounds?	Yes	☐ No			
Does this material	contain any para subst	ituted phenolic compo	ounds?	Yes	☐ No		
Layers :	✓ Single-Phas	Multi-Pha	se				
Container Type :	Drum Z	Tote 🗸	Truck 🗸	Other (exp	olain)	barge	!
Container Size :	4500 / 340K						
Number Of Units	: 2						
Proper U.S. DOT	Shipping Name :		Soc	diu Hydroxid	e Solution		
Class: 8	LIN/	<b>ν</b> Δ · ΙΙΝ1824	Di	3 · !!		R.C	) · na

1	FI ash Point	рН	Reactive Sulfides	Reactive Cyanides	Solids
	• na	10.5-12.4	na mg/l	na mg/l	0 %
ľ	Oil and Grease	TOC	Zinc	Copper	Nickel
l	na mg/l	na mg/l	na mg/l	na mg/l	na mg/l

### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Water	88-97	%
Sodium hydroxide	3-12	%

The material / product consists of the following materials	Ranges are acceptable	or %
Water	88-97	%
Sodium hydroxide	3-12	%
ECTION 5: Safety Related Data		
the handling of this material / product requires the use of special protecormal PPE	tive equipment, please explain.	
ECTION 6: Attached Supporting Documents		
ist all documents, notes, data, and/or analysis attached to this form as pa ISDS	art of the material / product profile.	
ECTION 7: Incompatibilities		
lease IIst all incompatibilities (if any): SDS		
ECTION 8: Material Producer's Certification		
he information contained herein is based on  generator knowledge are gove and attached description is complete and accurate to the best of meliberate or willful omissions of composition properties exist and that all isclosed. I certify that the materials tested are representative of all materials	y knowledge and ability to determin known or suspected hazards have	e that no
uthorized Signature :	Date: 7/9/2007	
rinted Name / Title: n/a - Product /		
ES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process Facility Information	on :
Compliance Officer: Prabhakar Thangudu	Please check with Clark Hick	man
Date: 7/9/2007 Status: Approved Rejected		
Approval Number: PA-2282		



### Waste Pre-Acceptance/Approval Letter

Date 8/22/2007

Dear Orval W Lewis

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2301

Generator: Targa Midstream Services LP

Address: 10319 Hwy 146 North

Mont Belvieu, TX 77580

### Waste Information

Name of Waste: Spent sodium hydroxide solution (from CBF unit)

TCEQ Waste Code #: Recycle

**Container Type:** 

**Detailed Description of Process Generating Waste:** 

A UOP Merox treating system for treating light mercaptans in the raw liquefied petroleur

gas stream

Color: dark Odor: strong pH: 12

**Physical State:** 

Incompatibilities: acids

Safety Related Data/Special Handling:

standard

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948

U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Gene	rator Information			
Company:	Targa Midstream Ser	vices LP		
Address:	10319 Hwy 146 Nort			
City, State, Zip:	Mont Belvieu, TX 7	7580		
Contact:	Orval Lewis		Title:	Technician
Phone No:	281-385-3215		Fax No:	281-385-3188
24/hr Phone:	281-732-7595		<del>_</del>	
U.S. EPA LD. No:	TXD0980625974			
State LD.	RRGEN		SIC Code:	NA
			<del></del>	
SECTION 2: Billin	g Information — 🔲 Sar	ne as Above		
Сошрану:	Targa Midstream Service			
Address:	PO Box 10			
City, State, Zip:	Mont Belvieu, TX 775	80		
Contact:		Title:		
Phone No:		Fax No:		
	**************************************	2 - 2 1 10,		
SECTION 3: General	ral Description of the V	<u>Vaste</u>		
	of Process Generating	olution (from CBF Unit)  Waste: a UOP Mcrox		for treating light mercaptans in the raw
	F7	<b>-</b>		
Physical State:	∠ Liquid     ↓	Sludge	Powder	
	☐ Solid	Filter Cake	Combination	D
Color: dark	Ode	or: strong		
<del></del>				
Specific Gravity (wa	nter=1): 1.11	Density: 9.3 [bs/gal		
-F ·	, <u></u>	· — ·		
Layers:	Single-phase	Multi-phase		
22,410.		to make himse		
Container Type:	Drum (	Tote 🗵	Truck	Other (explain)
<del>-</del> -	C) tylum (	_ rote	_	C Other (explain)
Container Size:	<del></del>		<u>5000gal</u>	
Frequency:	⊠ Weekly	Monthly	Quarterly	Yearly
Number of Units (co		Other:	<u> </u>	
•	• -			
Texas State Waste C	Code No: Recyc	clable Material		
Proper U.S. DOT SI	Lipping Name:	Sodium Hydroxide S	olution	
Class: 8	UN/NA:	UN 1824	PG: II	RQ: NA
Flash Point	рH R	eactive Sulfides	Reactive C	yanides Solids
>150	1 • (	mg/l	Qmg/l	<1%
Oil&Grease	TOC	Zinc	Copper	Nickel
Ome/I	Ome/I	Ome/I	Omg/t	Oma

### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units
The waste consists of the following materials	Ranges are acceptable	or %
Sodium Hydroxide Solution	98-100	%
		<del> </del>
		+
		<del> </del>

### SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain. standard

### SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package.

### SECTION 7: Incompatibilities

Please list all incompatibilities (if any): acids

### SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals:	X
TCLP Volatiles:	X
TCLP Semi-Volatiles:	X
Reactivity:	X
Corrosivity:	X
Ignitability:	X

### SECTION 9: Generator's Certification

The information contained herein is based on  $\boxtimes$  generator knowledge and/or  $\square$  analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature:	Date: 8/20/07
Printed Name/Title: Orval Lewis	
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	Drogger Frailite Information, ##Comple CVCDV land## Comple
Compliance Officer: Coloban Change	Process Facility Information: **Sample EVERY load** Create inbound load report - determine:
Date: 8-27-07 Approved Rejected	% Caustic, check density, check pH (should be around 12).
	make sure thereare NO solids or oil &
Approval Number: 230	grease 452/GRC
	•

<u>SE</u>	CTION 10: Waste Receipt Classification Under 40 CFR 437	
Is t	his material a wastewater or wastewater sludge?   YES   NO	
If '	Yes', complete this section.	
PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.		
Meta	ls Subcatezory: Subpart A	
	Spent electroplating baths and/or sludges Metal finishing rinse water and sludges Chromate wastes Air pollution control blow down water and sludges Spent anodizing solutions Incineration wastewaters Waste liquid mercury Cyanide-containing wastes greater than 136 mg/l Waste acids and bases with or without metals Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations	
	Vibratory deburring wastewater	
	Alkaline and acid solutions used to clean metal parts or equipment	
Ous S	Subcategory: Subpart B	
	Used oils Oil-water emulsions or mixtures Lubricants Coolants Coolants Contaminated groundwater clean-up from petroleum sources Used petroleum products Oil spill clean-up Bilge water Rinse/wash waters from petroleum sources Interceptor wastes Off-specification fuels Underground storage remediation waste Tank clean-out from petroleum or oily sources Non-contact used glycols Aqueous and oil mixtures from parts cleaning operations Wastewater from oil bearing paint washes	
<u>Organ</u>	nics Subcategory: Subpart C	
	Landfill leachate Contaminated groundwater clean-up from non-petroleum sources Solvent-bearing wastes Off-specification organic product Still bottoms Byproduct waste glycol	
	Wastewater from paint washes Wastewater from adhesives and/or epoxies formulation Wastewater from organic chemical product operations Tank clean-out from organic, non-petroleum sources	

(1)	ii ine	waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.						
(2)		If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.						
	Chron Coppe	ium: 0.2 mg/L nium: 8.9 mg/L r: 4.9 mg/L l: 37.5 mg/L						
(3)		waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or above any of the values listed above, the waste should be classified in the organics subcategory.						
		Metals Subcategory						
		Oils Subcategory						
		Organics Subcategory						

#### **SECTION 11: Additional Instructions**

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

## Mercury Environmental Services, Inc.

6913 HWY 225, Deer Park, TX 77536 Phone: (281)-476-4534 Fax: (281)-476-4406

**CES Environmental Services** 

4904 Griggs Rd Houston, TX 77021

Phone: (713) 676-1460 (713) 676-1676 Fax:

Attn: **Dana Carter** 

- CERTIFICATE OF RESULTS -

MES Lab#:

7060698

Client Sample ID:

Caustic

Extended ID:

Targa

Sample Collect Date: 6/22/2007 @ 5:20:00 PM

Sample Type:

Grab

Sample Receipt Date: 6/25/2007 @ 3:47:00 PM

Test Group / Method

Alkalinity Titrimetric P M OH Analyst: ASB Date / Time Method: SM 2320B MDL Units Result Hydroxyde Alkalinity as CaCO3 1 mg/L CaCO3 7/10/2007 / 9:00 AM 1520

Total Recoverable Metals (RCRA) Analyst: AM

MDL Date / Time Method: SW-846 6010B Units Result 0.040 7/16/2007 / 10:59 PM Sodium 13000 ma/L

Flags: AH: Exceeds "High Limit" L: Below "Low Limit" RL=regulatory limit

Tuesday, July 17, 2007

Holland D. Gilmore, Laboratory Director

Date

Report Date: 17-Jul-07 Page 1 of 1 7060698

## MERCURY ENVIRONMENTAL SERVICES QA/QC REPORT

ANALYTE	MB mg/L		LCS %REC	LCSD %REC	RPD	CCB mg/L	CCV %REC	
Sodium	< 0.02	9	97.6	97.8	0.20	< 0.029	95.0	
ANALYTE	MB mg/L	ORIG mg/L	DUP mg/L	9TD %REC				
Alkalinity	< 1	1519	1301	106				

Key to QA Abbreviations

MS=Matrix Spike
MSD=Matrix Spike Duplicate
RPD=Relative Percent Deviation
MB=Method Blank
LCS=Laboratory Control Standard
CCV=Continuing Calibration Verification
CCB=Continuing Calibration Blank
%Rec=Percent Recovery

Signature: Holland D. Gilmore / Laboratory Director

July 17, 2007

EPAHO041000251

	COMPANY NAME; (BILL TO:)	nviran	nento	ilser	vices		M	ES		- Ci	HAIN	OF	CUST	ODY		771-4MES 476-4534
	COMPANY ADDRESS: 404 ()	riggs Ro	ATE IX		77021	$-\left \begin{array}{c} \bar{I} \\ \bar{G} \end{array}\right $	Merei 913	ry E vy. 225	nvir • De	onme er Park	ntal , TX 7	Ser 7536	vices	5	Fax (28	1)-476-4406
	Mr	n Mar	Y LIST	ZIP _		_	3	RAME	TERS F	OR AN	ALYSIS			7	RE	MARKS
	CONTACT PERSON'S NAME: 949 CONTACT PERSON'S PHONE: 713-	748-980	FAX #.				Munth A							MINERS	PURNA	ROUND TIME
52	PROJECT ADDRESS:  YOUR P.O.  PROJECT ADDRESS:		HOUP HOLL	PÓJEC" NÁME	i:	7/13	ኛ/ -					/	NUMBER OF CONT.	PRESENVA NOWS	SPECIAL LI	
	YOUR SAMPLE DESCRIPTION	GRAB/COMP.	DATE	TIME	MATRIX	, J	1		(	( /	<b>1</b>	, 	N. N.	E.	please d	de one, il Yes, escribe bebw
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	METHOD OF PAYMENT	SHIPPED BY: (Signature)			DURIER Dusture)				FLE (See	CEIVED F	OA MES	Br:	•		DATE	TIME
8	Sample Remainder Disposal	<del></del>			E	lasupeR I	Lab To I	Dispose	OI AII S	ample R	emaind	ers				<b>_</b>
	☐ Return Sample Remainder To Client Viz				(!	Signature;	<u> </u>						(	Dale)		

## **Material / Product Approval Letter**

Date 2/21/2008

Dear

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2433

Expiration Date 2/21/2010

**Producer:** CES Environmental Services, Inc.

**Address:** 4904 Griggs Rd

Houston, TX 77021

Material / Product Information

Name of Material / Product Spent caustic (KOH - Potassium Hydroxide), high c Container Type:

Detailed Description of Process Generating or Producing the Material / Product:

Material received from customers

Color: Varies 0

Odor: Sulfur pH: >12.5

**Physical State:** 

**Incompatibilities:** Strong acids

Safety Related Data/Special Handling:

std PPE (safety glasses, che suit, gloves, goggles)

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

1.大理 电温水平

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

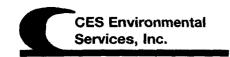
SECTION 1: Materi	al Producer Information	<u> </u>			
Company:	CES Environmental Se	rvices, Inc.			
Address :	4904 Griggs Rd 4904 (	Griggs Road			
City, State, Zip :	Houston TX 77021				
Contact :	Matt Bowman		Title :		
Phone No:	(713) 676-1460		Fax:		
24 / HR Phone :					
U.S EPA I.D No:	TXD008950461				
State I.D :	30900		SIC Code	)	
SECTION 2: Billing	Information				
Company :	CES Environmental Ser	vices, Inc.			
Address :	4904 Griggs Rd 4904 (	Griggs Road		· · · · · · · · · · · · · · · · · · ·	
City, State, Zip :	Houston TX 77021				
Contact :			Title :		
Phone No :	(713) 676-1460		Fax:		
SECTION 3: Genera	al Description of the Mate	rial / Product			
Name of Mateiral	/ Product : Spent causti	c (KOH - Potassiur	n Hydroxide), high concer	ntration	
Detailed Descript	tion of the Process Ger	nerating or Produc	ing the Material / Produ	ct:	
Material received	from customers				
Physical State :	<b>✓</b> Liquid	Sludge	Powder		
	Solid	Filter Cake	Combination		
Color :		Varies	Odor :	Sulfur	
Specific Gravity (	Water=1) :	1.2-1.3	Density :	8.5-9.5	lbs / gal
Does this material	contain any total phenolic	compounds?	☐ Yes ✓ No		
Does this material	contain any para substitut	ed phenolic compo	unds? Yes	<b>☑</b> No	
Layers :	✓ Single-Phas	Multi-Phas	se .		
Container Type :	Drum 🟢	Tote 🗸	Truck	plain)	
Container Size :	5000				
Number Of Units	: 1				
Proper U.S. DOT	Shipping Name :	UN1760,	Corrosive liquids, n.o.s.,	8, PG II (Potassium Hydroxi	de)
Class: 8	UN/NA	: UN1760	PG: II	R	<b>Q</b> : 1000

Flash Point na		pH >12.5	Reactive Sulfides mg/l	Reactive Cyanides mg/l	<b>Solids</b> <0.5 %	
	Oil and Grease	TOC	Zinc	Copper	Nickel	بيخية .
=	na mg/l	na mg/l	mg/l	na mg/l	mg/l	-

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Potassium hydroxide	20-45	%
water	55-80	%
Potassium carbonate	0-2	%
Potassium chloride	0-2	%
···	<u> </u>	

r otassium carbonate	0.2	/0
Potassium chloride	0-2	%
SECTION 5: Safety Related Data		
If the handling of this material / product requires the use of s std PPE (safety glasses, che suit, gloves, goggles)	special protective equipment, please explain.	
SECTION 6: Attached Supporting Documents		
List all documents, notes, data, and/or analysis attached to the MSDS	his form as part of the material / product profile.	
SECTION 7: Incompatibilities		
Please list all incompatibilities (if any): Strong acids		
SECTION 8: Material Producer's Certification		
The information contained herein is based on  generator  above and attached description is complete and accurate to deliberate or willful omissions of composition properties exist disclosed. I certify that the materials tested are representative	the best of my knowledge and ability to determine that st and that all known or suspected hazards have been	t no
Authorized Signature :	Date : 2/20/2008	
Printed Name / Title : Gary Lenertz /		
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process Facility Information :	
Compliance Officer: Prabhakar Thangudu	mallyd	
Date: 2/21/2008 Status: Approved	Rejected	
Approval Number : 2433		



## PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1.	Base Pricing (including freight):
	CES charge \$ 600.00 in fret
2.	Contamination Limits (maximum limit before surcharges apply):
	MAX 0.5% Solids into Sheen Hydrocarbons
3.	Surcharge Pricing:
	N A
4.	Special Testing Requirements:
	SG, % WACHER to % KOH) % Solids, Uisual
5.	Treatment and Handling Protocol:
	leep Splitter 1 3 Splitter 2 caustic Seperate until alternate use is approved by director of sales
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



## PROCESS FACILITY INFORMATION (CES USE ONLY!!)

7.	Tests for Product Recovered/Recycled (if applicable):
	Management for Declaration and Approximately (16 months)
8.	Management for Product Recovered/Recycled (if applicable);

## **Material Safety Data Sheet**

#### **WEAK CAUSTIC SOLUTION - S1**

SECTION	1	<ul><li>Chem</li></ul>	ical Pi	roduct a	and Co	mpany	Identification	ļ
OFOTION	_	^			4.			

SECTION 2 - Composition, Information on Ingredients

SECTION 3 – Hazards Identification SECTION 4 – First Aid Measures

SECTION 5 - Fire Fighting Measures

SECTION 6 - Accidental Release Measures

SECTION 7 - Handling and Storage

SECTION 8 - Exposure Controls and Personal Protection

SECTION 9 - Physical and Chemical Properties

SECTION 10 - Stability and Reactivity

SECTION 11 - Toxicological Information SECTION 12 - Ecological Information

SECTION 13 - Disposal Considerations

SECTION 14 - Transport Information

SECTION 15 - Regulatory Information

SECTION 16 - Other Information

#### SECTION 1 - CHEMICAL PRODUCT and COMPANY IDENTIFICATION

1.1 Product Name Weak Caustic Solution Chemical Family Inorganic Salt Solution

Plant Source Splitter I Unit Formula NA (mixture)

1.2 Manufacturer Enterprise Products Operating LP

10207 FM 1942

Mont Belvieu TX 77580

281-385-4200

1.3 Emergency Contact Matt Bowman 713-826-1329

CHEMTREC 800-424-9300

#### SECTION 2 - COMPOSITION and INFORMATION ON INGREDIENTS

#### 2.1 Chemical Ingredients (% by wt)

#### Typical Analysis

Sodium Sulfide (Na2S) CAS#: 1313-82-2 0-1%Sodium Hydroxide (NaOH) CAS#: 1310-73-2 0-15% Typical 6 to 7%

Water remaining %

#### FOR ADDITIONAL INFORMATION SEE SECTION 9

MSDS Weak Caustic Solution - S1

#### SECTION 3 - HAZARDS IDENTIFICATION

NFPA:

Health – 3

Flammability – 0

Reactivity – 1

#### **EMERGENCY OVERVIEW**

Warning: Solution is highly alkaline.

May evolve small amounts of hydrogen sulfide, a highly toxic gas. EYE contact will cause marked eye irritation and possible corneal damage. SKIN contact will result in irritation and possible corrosion of the skin. INGESTION will irritate and burn the mouth, throat and the gastrointestinal tract; contact with stomach acid will cause hydrogen sulfide vapors to be released. HEATING or ACID contact will cause hydrogen sulfide gas to evolve.

#### 3.1 POTENTIAL HEALTH EFFECTS

**EYE:** Contact with the eyes will cause marked eye irritation and possibly severe corneal damage.

**SKIN CONTACT:** Contact with the skin will cause skin irritation or a burning sensation. Prolonged contact will result in corrosion of the skin.

**SKIN ABSORPTION:** Absorption is unlikely to occur.

**INGESTION:** Ingestion will result in severe burning and corrosion of mouth, throat and the gastrointestinal tract. If the ingested material contacts stomach acid, highly toxic hydrogen sulfide gas will be evolved.

**INHALATION:** Product solution and vapors contain some highly toxic hydrogen sulfide gas. Exposure to this gas causes headaches, nausea, dizziness and vomiting. Continued exposure can lead to loss of consciousness and death.

CHRONIC EFFECTS – CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

#### SECTION 4 - FIRST AID MEASURES

- 4.1 EYES: Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye. Obtain immediate medication.
- 4.2 **SKIN:** Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain immediate medical attention.
- 4.3 **INGESTION:** DO NOT INDUCE VOMITING. If victim is conscious, immediately give 2 to 4 glasses of water. If vomiting does occur, repeat fluid administration. Obtain immediate medical attention.
- 4.4 **INHALATION:** Remove victim form contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain immediate medical attention.

MSDS Weak Caustic Solution - S1

#### SECTION 5 - FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

FLASH POINT: Not Flammable METHOD USED: NA

5.2 FLAMMABLE LIMITS: Hydrogen Sulfide LFL: 4% UFL: 44%

5.3 EXTINGUISHING MEDIA: Water spray or foam or as appropriate for combustion involved in fire.

- 5.4 FIRE and EXPLOSIVE HAZARDS: Solution is non-flammable. However if these solutions are exposed to heat or acids, hydrogen sulfide will be released and may form explosive mixtures with air (see above). Keep containers and/or storage vessels in fire area cooled with water spray. Heating may cause the release of hydrogen sulfide vapors.
- 5.5 FIRE FIGHTING EQUIPMENT: Because of the possible presence of toxic gases and the corrosive nature of the product, wear self-contained breathing apparatus, positive pressure, MSHA / NIOSH (approved or equivalent) and full protective gear.

#### SECTION 6 - ACCIDENTIAL RELEASE MEASURES

- 6.1 SMALL RELEASES: Isolate for 75 feet. Confine area to qualified response personnel. Wear proper Personnel Protective equipment (See Section 8). Confine release material by berming or diverting its path Absorb on sand, earth or other inert dry absorbent. Do not allow into sewer, storm drains or any waterway. Oxidize residual reactive sulfides with a weak (3-5%) hydrogen peroxide solution to stop the release of toxic hydrogen sulfide. Remove contaminated soil and dispose of in accordance with all governmental regulations.
- 6.2 LARGE RELEASES: Activate Emergency Response Plan procedures. Isolate release area for 500 feet. Confine area to qualified response personnel. Wear proper Personnel Protective Equipment (See Section 8). Shut off release, if safe to do so. Dike spill area to prevent runoff into sewers, drains (potential toxic and explosive mixtures of hydrogen sulfide in confined spaces) or surface waterways (potential aquatic toxicity). Recover as much of the solution as possible. Treat remaining material as a small release (See 6.1).

#### SECTION 7 - HANDLING and STORAGE

- 7.1 HANDLING: Wear proper protective equipment (See Section 8). Avoid breathing product vapors. Avoid contact with skin and eyes. Use only in a well ventilated area. Dilute product only in enclosed containers. Wash thoroughly after handling.
- 7.2 STORAGE: Store in well ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures [<80 F (27 C)]. (See Section 10.4 for materials of construction)

MSDS Weak Caustic Solution - S1

#### SECTION 8 - EXPOSURE CONTROLS and PERSONAL PROTECTION

- 8.1 RESPIRATORY PROTECTION: If working near open container or storage vessel opening or open tank truck dome cover and, the concentration of sodium sulfide is greater than 500 ppm have available self-contained breathing apparatus, positive pressure, MSHA / NIOSH (approved or equivalent). For concentrations of sodium sulfide below 500 ppm, this does not require the use of a self-contained breathing apparatus. For concentrations below 500 ppm one should have available a respirator with a cartridge rated for hydrogen sulfide.
- 8.2 SKIN PROTECTION: Neoprene rubber gloves, chemical suit and boots should be worn to prevent contact with the liquid. Wash contaminated clothing prior to reuse. Contaminated leather shoes cannot be cleaned and should be discarded.
- 8.3 EYE PROTECTION: Chemical goggles and a full face shield.

8.4 EXPOSURE GUIDELINES:

OSHA

**ACGIH** 

Hydrogen Sulfide

TWA STEL

TLV STEL

20 ppm (ceiling)

10 ppm (ceiling)

8.5 ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors. Where feasible scrub process or storage vessel vapors with caustic solution. Maintain eye wash safety shower in areas where chemical is handled.

#### SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

- 9.1 APPEARANCE:
- 9.2 ODOR: Hydrocarbon (mercaptan), possibly hydrogen sulfide (rotten egg) odor. Sulfides Less than 100 ppm (Typical 10 to 50 ppm)
- 9.3 BOILING POINT: Not Determined
- 9.4 TOC: Typical 15,000 to 30,000 ppm
- 9.5 OlL and Grease: Typical 20 to 40 ppm
- 9.6 VAPOR DENSITY: (Air = 1.0) 1.17
- 9.7 SOLUBILITY IN WATER: Complete
- 9.8 SPECIFIC GRAVITY: 1.03 1.3 (8.59 10.83 lbs/gal)
- 9.9 pH: 11.5 13.5
- 9.10 CHLORIDES: Less than 60,000 ppm

#### SECTION 10 – STABILITY and REACTIVITY

- 10.1 STABILITY: This is a stable material.
- 10.2 HAZARDOUS POLYMERIZATION: Will not occur.

MSDS Weak Caustic Solution - S1

- 10.3 HAZARDOUS DECOMPOSITION PRODUCTS: Heating product will evolve H2S gas. fire conditions will cause the production of sulfur dioxide. Hydrogen sulfide (4 44%) may form flammable mixtures with air.
- 10.4 INCOMPATIBILITY: Acids will cause the release of highly toxic hydrogen sulfide. Sulfidic caustic solution is not compatible with copper, zinc, aluminum or their alloys (i.e. bronze, brass, galvanized metals, etc.). Corrosive to steel above 150 F (65.5 C). These materials of

#### SECTION 10 – STABILITY and REACTIVITY (Continued)

construction should not be used in handling systems or storage containers for this product. (See Section 7.2 Storage)

#### SECTION 11 - TOXICOLOGICAL INFORMATION

- 11.1 ORAL: Data not available.
- 11.2 DERMAL: Data not available.
- 11.3 INHALATION: INH-RAT LC 50: 444 ppm (hydrogen sulfide)
- 11.4 CHRONIC and CARCINOGENICITY: No evidence available.
- 11.5 TERATOLOGY: Data not available.
- 11.6 REPRODUCTION: Data not available.
- 11.7 MUTAGENICITY: Data not available.

#### SECTION 12 - ECOLOGICAL INFORMATION

None Available

#### SECTION 13 - DISPOSAL CONSIDERATIONS

If released to the environment for other than its intended purpose, this product contains some reactive sulfides but not a sufficient quantity to meet the definition of a D003, hazardous waste. The pH may be high enough to meet the definition of a corrosive waste, D002.

#### **SECTION 14 - TRANSPORT INFORMATION**

- 14.1 DOT SHIPPING NAME: Corrosive liquids, n.o.s.
- 14.2 DOT HAZARD CLASS: 8
- 14.3 UN/NA NUMBER: UN1760
- 14.4 PACKING GROUP: II
- 14.5 DOT PLACARD: Corrosive

#### MSDS Weak Caustic Solution - S1

- 14.6 DOT LABLE(s): Corrosive
- 14.7 IMO SHIPPING NAME: Sodium Hydroxide Solution
- 14.8 RQ (REPORTABLE QUANTITY): 1,000 lbs (454 Kg) 100% basis (Approx. 538 gals)
- 14.9 USCG BARGE CERTIFICATION: SSH (sodium sulfide, hydrosulfide solutions, H2S 15 ppm or less). SSI (sodium sulfide, hydrosulfide solutions, H2S greater than 15 ppm but less than 200 ppm).

#### SECTION 15 - REGULATORY INFORMATION

- 15.1 OSHA: This product is listed as a hazardous material under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200.
- 15.2 SARA TITLE III. a. EHS (Extremely Hazardous Substance) List:
  - b. Sections 311 and 312 (Tier I, II) Categories:

Immediate (acute) Yes
Fire No
Sudden Release No
Reactivity Yes
Delayed (chronic) No

- c. Section 313 (Toxic Release Report-Form R): No
- d. TPQ (Threshold Planning Quantity): No
- 15.3 CERCLA and SUPERFUND: RQ (Reportable Quantity) 1,000 lbs
- 15.4 TSCA (Toxic Substance Control Act) Inventory List: Yes
- 15.5 RCRA (Resource Conservation and Recovery Act) Status: Yes
- 15.6 WHMIS (Canada) Hazard Classification: E, D1
- 15.7 DOT HAZARDOUS MATERIAL: (See Section 14) Yes
- 15.8 CAA HAZARDOUS AIR POLLUTANT (HAP): No

#### SECTION 16 - OTHER INFORMATION

REVISIONS: The entire MSDS was reformatted to comply to ANSI Standard Z400.1-1993.

THE INFORMATION PUBLISHED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN COMPILED FROM OUR EXPERIENCE AND OSHA, ANSI, NFPA, DOT, ERG AND CHRIS. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THIS INFORMATION FOR THE ADOPTION OF NECESSAREY SAFETY PRECAUTIONS. WE RESERVE THE RIGHT TO REVISE THE MATERIAL SAFETY DATA SHEET PERIODICALLY AS NEW INFORMATION BECOMES AVAILABLE.

MSDS Weak Caustic Solution – S1



4904 Griggs Road Houston TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1460

## **Material / Product Approval Letter**

Date 10/31/2007

Dear

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile# 2497

Producer: CES Environmental Services, Inc.

Address: 4904 Griggs Rd

Houston, TX 77021

#### Material / Product Information

Name of Material / Product CES Fuel

Container Type:

#### Detailed Description of Process Generating or Producing the Material / Product:

pH: na

Accumulation of off-spec fuels from various customers

Color: Clear to brown Odor: Hydrocarbon

**Physical State:** 

Incompatibilities: see MSDS

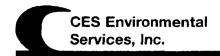
Safety Related Data/Special Handling:

see MSDS

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

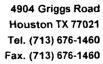
SECTION 1: Mater	ial Producer Infor	mation				
Company :	CES Environme	ental Services, In	с.			
Address :	4904 Griggs Rd	d 4904 Griggs Ro	oad			
City, State, Zip:	Houston TX 770	021				
Contact :	Matt Bowman			Т	itle :	
Phone No :	(713) 676-1460	1		F	ax :	
24 / HR Phone :					· · · · · · · · · · · · · · · · · · ·	
U.S EPA I.D No:	na					
State I.D:	na			s	IC Code na	
SECTION 2: Billing	Information					
Company:	CES Environme	ental Services, Inc	C.			
Address :	4904 Griggs Rd	4904 Griggs Ro	oad			The second state of the se
City, State, Zip:	Houston TX 770					
Contact :				Т	itle :	
Phone No :	(713) 676-1460		***************************************	F	ax:	
SECTION 3: Genera		****	uct			
Name of Mateiral	/ Product : CES	Fuel				
Detailed Descript	ion of the Proce	ess Generating	or Producir	ng the Material	/ Duo diviete	
				ig the material	/ Product:	
Accumulation of of		_		ig the material	/ Product:	
	ff-spec fuels from	n various custom	ers			
Accumulation of of Physical State:	ff-spec fuels from	n various custom	ers Sludge	Powd	er	
	ff-spec fuels from	n various custom	ers	Powd		
	ff-spec fuels from	n various custom	ers Sludge Tilter Cake	Powd	er vination	lydrocarbon
Physical State :	ff-spec fuels from  Liquid  Solid	n various custom	ers Sludge Filter Cake	Powd	er vination	
Physical State : Color : Specific Gravity (	ff-spec fuels from Liquid Solid  Water=1):	r various custom S Clear to br	ers Sludge Filter Cake	Powd Comb Odor: Density:	er vination ————————————————————————————————————	
Physical State : Color :	ff-spec fuels from  Liquid  Solid	r various custom S Clear to br	ers Sludge Filter Cake	Powd Comb Odor: Density:	er vination ————————————————————————————————————	
Physical State :  Color :  Specific Gravity (' Layers :	ff-spec fuels from  Liquid  Solid  Water=1):	r various custom S Clear to br	ers Sludge filter Cake rown O	Powd Comb Odor: Density:	er vination ————————————————————————————————————	
Physical State : Color : Specific Gravity (	ff-spec fuels from  Liquid  Solid  Water=1):	clear to br	ers Sludge Filter Cake Fown O	Powd Comb Odor: Density:	er vination ————————————————————————————————————	
Physical State :  Color :  Specific Gravity (  Layers :  Container Type :  Container Size :	ff-spec fuels from  Liquid  Solid  Water=1):  Vingle-P	clear to br	ers Sludge Filter Cake Fown O	Powd Comb Odor: Density:	er vination ————————————————————————————————————	
Physical State :  Color :  Specific Gravity (  Layers :  Container Type :  Container Size :  Number Of Units	ff-spec fuels from  Liquid  Solid  Water=1):  Single-P  Drum	Clear to br	ers Sludge Filter Cake Fown O	Powd Comb Odor: Density:	er sination	8 lbs / gal
Physical State :  Color :  Specific Gravity (  Layers :  Container Type :  Container Size :	ff-spec fuels from  Liquid  Solid  Water=1):  Single-P  Drum	Clear to br	ers Sludge Filter Cake Fown O	Powd Comb Odor: Density:	er vination ————————————————————————————————————	8 lbs / gal
Physical State :  Color :  Specific Gravity (  Layers :  Container Type :  Container Size :  Number Of Units	ff-spec fuels from  Liquid  Solid  Water=1):  Single-P  Drum  Shipping Name	Clear to br	ers Sludge Filter Cake Fown  Julti-Phase	Powd Comb Odor: Density:	er sination	8 lbs / gal
Physical State:  Color: Specific Gravity ( Layers: Container Type: Container Size: Number Of Units Proper U.S. DOT S	ff-spec fuels from  Liquid  Solid  Water=1):  Single-P  Drum  Shipping Name	Clear to br 0.7-0.9  Phas Tote	ers Sludge Filter Cake Fown  Multi-Phase	Powd Comb Odor: Density:  Fruck O Flammable Liq	er sination	8   Ibs / gal
Physical State:  Color: Specific Gravity ( Layers: Container Type: Container Size: Number Of Units Proper U.S. DOT S	ff-spec fuels from  Liquid  Solid  Water=1):  Single-P  Drum  Shipping Name	Clear to br 0.7-0.9  Phas Tote  UN/NA: UN	ers Sludge Filter Cake Fown Multi-Phase	Powd Comb Comb Density:  Fruck O Flammable Liq PG:	er sination  H 7- ther (explain)  uids, n.o.s., UN 1993, PG  II  Rec-ctive (yanides	8   Ibs / gal
Physical State:  Color: Specific Gravity ( Layers: Container Type: Container Size: Number Of Units Proper U.S. DOT S  Class: 3	ff-spec fuels from  Liquid  Solid  Water=1):  Single-P  Drum  Shipping Name	Clear to br 0.7-0.9  Phas Tote  UN/NA: UN	ers Sludge Filter Cake Fown  Multi-Phase  1943  React  0	Powd Comb Comb Density:  Fruck O Flammable Liq PG:	er sination	8   Ibs / gal

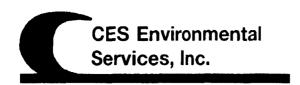
	MPONENTO TARILE	0	Unite
	MPONENTS TABLE ct consists of the following materials	Concentration Ranges are acceptable	Units or %
The material / produ	see attached MSDS	Ranges are acceptable	01 /8
			1
SECTION 5: Safety Related Data			
	/	45	
ir the nandling of this material i see MSDS	product requires the use of special protect	tive equipment, please explain.	
see MSD3			
SECTION 6: Attached Supporting D	)ocuments		
	, and/or analysis attached to this form as pa	art of the meterial I product profile	
MSDS	, and/or analysis attached to this form as pa	art of the material i product prome.	
SECTION 7: Incompatibilities			
Please list all incompatibilities	(if any):		
see MSDS	(		
SECTION 8: Material Producer's Ce			
The information contained here	in is based on 🗹 generator knowledge an	nd/or analytical data. I hereby cerit	
above and attached description deliberate or willful omissions o	is complete and accurate to the best of my of composition properties exist and that all	/ knowledge and ability to determine the	at no n
lisclosed. I certify that the mat	erials tested are representative of all mater	ials described by this document.	••
Authorized Signature :	NA	Date: 11/2/2007	
Printed Name / Title : n/a /	•		
- Inted Name / Inte . Ind /			
CES USE ONLY (DO NOT WRIT	E IN THIS SPACE)	Special Pricing / Analytical Info	);
	D'AA OT.	Analyze for Na, Sp.gr.,	
Compliance Officer: Prabhal	kar Thangudu Robbah Rilange R	BTU, Visosit (Should bethin	Rajuid)
		suspended particle size, pity	on a 50/5
Date: 11/2/2007	Status: Approved Rejected	Recommended Treatment:	
Approval Number:	2497	mixture of H20 and somp	
Approval Number :	2497	pass through 250 micron	filter.

Contraction to the second seco	
Rhodia	Profile #
X BATON ROUGE X HOUSTON BAYTOWN	N HAMMOND DOMINGUEZ MARTINEZ
Material Profile Data Sheet	-
A. General Information	SHIDDING FACILITY
	SHIPPING FACILITY Contact Matt Bowman
Customer Name CES Environmental Services, Inc.	Shipper Name CES Environmental Services, Inc.
	Address 4904 Griggs Road
	City Houston State TX Zip 77021
	Phone # 713-676-1460 Fax # 713-676-1676
USEPA ID#	USEPA ID#
— · · · · · · · · · · · · · · · · · · ·	E-Mail Address mbowman@cesenvironmental.com State Gen. ID No.
B. Waste Description Waste Name	CES Fuel
Source Code G Is a r	representative sample provided? X Yes No
Process Description: Accumulation of off-spec fuels	
Color Brown X Liquid 100 % Odor Solvent Solid %  None Strong Sludge %  X Mild	PHASES X Most Appropriate Method  X Single Layer Specific Facility Restriction:  Double Layer Multi-Layer
Wastewater or X Non-Wastewater as defined in 40	CFR 268.2 ues are required, such as spills, fire response, etc.:
	ues are required, such as spills, fire response, etc.:  Use SCBA. Cool surroundings with water spray.
F. RCRA Information	
Is this a USEPA hazardous waste? YesX No	<u></u>
Is this an acutely hazardous waste (40 CFR 261.31 and 33)	Yes X No
List the USEPA hazardous waste codes, Specify the nature of any	D003 waste in section H 1: None
Regulated Medical / Infectious waste	CERCLA Regulated (Superfund) Waste
Regulated Subpart CC Waste (VOC's ≥ 500 ppm by wt.)	Spent Solvent
Hazardous Debris (Subject to alternative LDR treatment stand	dards X Exempt Waste (list reference in 40 CFR)
List any State Waste Codes or other state designations:	None
S. Shipping Information	
DOT PROPER SHIPPING DESCRIPTION	Flammable Liquid, N.O.S.
Technical N.O.S. descriptions Petroleu	um Distillates ERG # 128
HAZ. CLASS 3 UN or NA ID Number U	IN11993 Packing Group II RQ 100
X TRUCK RAIL	
BULK SHIPPING CONTAINERS	CONTAINER TYPE
Quantity/Size Frequency	X Tanker Vac. Trailer
5000 gal/TT Weekly	Other

Rhodia				Profil	e #
KEY SAFETY INFOR	ونكبيناهم				
Primary Health Hazard:	X Inhalation	X Skin Contact	X ing	estion	
Do you open dome to sample	or load?	X Yes	No		
How do you minimize vapor e	xposure?				
First Aid:					
Type of Gloves Used: Nitrile Neopren	e Rubber	PVC E	Butyl	Other	
Type of Body Protection: Tyvek coated suit List all: Chronic Health Hazards	Saranex	SuitAcid re	sistant slicker	suitO	ther:
Acute Heath Hazards					
REGULATORY INFO	RMATION			OSHA Chemicals:	Please check all that apply and
Exempted from RCRA?	X Yes	]No			-
exempted from RCRA, indic	ate basis:			Vinyl chloride mono	mer Range (CM)
Spent sulfuric acid used to produc		er 40 CFR261.4(a)(7)		Benzene	
sed as an ingredient to make su		261.2(e)(1)(l)		Acrylonitrile	
please provide analytical informa	ion or justification)			Formaldehyde Others	
				List	
HANDLING INFORMA	TION				
s the material soluble in:	<b></b> Water	X Solvent			
solvent, what type?					
an material pass through a 2	0 mesh screen?	X Yes I	No		
ow do you clear lines?	N ₂	Steam	Solvent	Water	Other
ump Materials?	Carbon Steel		ss steel Gra		Other
ump Seal?		, Flush Plan, Face and			
ipeline Materials?	Carbon Steel Carbon Steel	<b></b>		ade:	Other
torage Containter Mat'ls? emperature Limits?	Max:	Min:		ade: -Heat Issues:	Other
st any compatibility problems	<del></del>	· · · · · · · · · · · · · · · · · · ·		- 11cat 155ucs.	
	CERTIFICATIO	N			
ENERATOR PROFILE			nt on hehalf o	of the Generator that t	the
ereby certify that I am an au	thorized agent of th	e Generator, and warra	cic on bondin o		
ereby certify that I am an au ormation supplied on this fo	rm and on any attac	hments or supplements	s hereto is con	mplete and accurate,	
ereby certify that I am an au	rm and on any attac	hments or supplements	s hereto is con	mplete and accurate,	
ereby certify that I am an au	rm and on any attac zardsof the materia	hments or supplements	s hereto is con	mplete and accurate,	

1) Hazardous Characteristic  Fuming/Smoking Waste  Dioxins & Furans  Ozone Depletion 40 CFR 82  Chlorine	Wa	ater Reactive Reactive	ents-	Section mu		completed	<b>l.</b>	Total	
Dioxins & Furans Ozone Depletion 40 CFR 82 Chlorine	Air	Reactive		Acid Reactive	3	(3)Metals		T-1-1	
Dioxins & Furans Ozone Depletion 40 CFR 82 Chlorine	Air	Reactive			9				Total
Ozone Depletion 40 CFR 82 Chlorine% Bromine%				Alkaline Read	ctive	(0)		Minimum	(ppm)
Chlorine % Bromine %		plosive		Polymerizable				Detection	(PP)
Bromine%	· •	dioactive		Inorganic	-			Limit	
	Bio	logical		Aqueous	Arso	enic (As)	1.30	0 ppm	
lodine%		ock Sensitive		Peroxides	Tha	llium (TI)	1.4	4 ppm	
Fluorineppm	<b>———</b>	bestos	X	Ignitable		er (Ag)	0.2	0 ppm	
Cyanidesppm	<u> </u>	ected Benzene				um (Ba)	0.00	• • •	
Sulfidesppm		ntrolled Benzen		te		yllium (Be)	0.0		
Phenolics ppm		CFR 61 Subpar idizer	τrr			omium (Cr)	0.0		
ppm		dizei				mony (Sb) d (Pb)	0.8: 0.4	• • •	
(2) Physical Characteristi	ics					mium (Cd)	0.0		
	Minimum	Maximum	Actu	al		cury (HÌg)	0.0		
]Ash (%)					Sele	nium (Se)	5.2	0 ppm	
Phosphate (mg/l)	······································					cel (Ni)	1.0	1 ppm	
Potassium (mg/l)						alt (Co)	0.38	55 ppm	
Sodium (mg/l)						ganese (Mn)	0.0	• •	
Water (%)					-	denum (Mo)			
Sulfur (%)	0.75	0.85		82		adium (V) c (Zn)	0.09		
Specific Gravity Viscosity (centipoise)	0.75	0.83		02		per (Cu)	0.10 0.5	• • •	
PHconstituent						omium (6+)	0.0		
BTUs (1000/lb)				<del></del>		minum (Al)	0.0		
Flash Point (closed cup°F)	75	100	8	30		nium (Ti)	0.0	• •	
				certify metal	s are b	elow MDL leve	ls	X	Yes
				by knowledge					No
Chemical Composition (If a	actual nercer	ntages are not k	cnown	-		-	ast 100%	<u></u>	-J
Constituents must be specifical									
IC	,	Minimum	p	Maximum		Avg/Actual	-	CAS Nu	mber
] Xylene		1	%	30	-	5	%	106-4	
Heptane		1	<del>-</del> %	30	-	5	-%	142-8	2-5
Hexane		11	%	30		5	%	110-5	
Ethyl Benzene		1	_%	30		5	_%	100-4	
Toluene	<del> </del>	1	_%	30		5	_%	108-8	
<u>Methanol</u>		1	_%	30		5	_%	67-56	
		11							
,		1	_				-		
		<u> </u>							
Butanol Propanol Ethanol Dimethyl Disulfide	e	1 1 1	-% -% -%	30 30 30 30	- - - -	5 5 5	_% _% _% %	71-36 71-23 64-17 624-9	3-8 7-5





## Waste Pre-Acceptance/Approval Letter

Date 1/22/2008

Dear Roy Hebert

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile# 2598

Expiration Date 1/22/2010

Generator: Enterprise Products Operating, L.P. - Port Allen

Address: 2220 North River Rd.

Port Allen, LA 70767

#### Waste Information

Name of Waste: Spent potassium hydroxide.

TCEQ Waste Code #: OUTS106H

**Container Type:** 

#### **Detailed Description of Process Generating Waste:**

Sweetening natural gas liquid before running the merox process. The natural gas liquid i fractionated to remove C4 and lower. C5 and higher are run through the merox process.

Color: Dark Odor: Ammonia pH: 12-14

**Physical State:** 

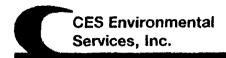
Incompatibilities: Acids

Safety Related Data/Special Handling: Std PPE for high pH materials w/sulfides

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Gene	rator Information			
Company:		Operating, LP - Port Alle	n	
Address:	2220 North River R	.d.		
City, State, Zip:	Port Allen, LA 707	67		
Contact:	Roy Hebert		Title:	Field Environmental Scientist
Phone No:	225-381-3459		Fax No:	225-381-3476
24/hr Phone:	225-381-3459			
U.S. EPA I.D. No:	LAR000033100		<del></del>	
State l.D.	G-121-10915	00022	SIC Code:	NA .
SECTION 2: Billin	g Information – 🛛 S	ame as Above		
Company:		· · · · · · · · · · · · · · · · · · ·		
Address:				
City, State, Zip:				
Contact:		Title:		
Phone No:		Fax No:		
_		······································		
SECTION 3: Gener	ral Description of the	Waste		
Name of Worter Co.	ant Bataccium Lludravi	ida		
Name of waste: <u>Spe</u>	ent Potassium Hydroxi of Process Generati	ng Waste: 2012eth 15 10	afural gas	and lower. C5 and higher are run through the
orecess. The not	1 gas light is	fretimeted to	remove C4	and lower. C5 and higher
Physical State:	⊠ Liquid	Sludge	Powder	are run through the
i nystem state.	C Calla	Colo	Combination	n merex process.
	Solid	☐ Filter Cake	Combinatio	n ci i i i
Color: Dark	O	dor: Ammonia		
Specific Gravity (wa	iter=1): <u>1.203</u>	Density: 10.03 lbs/gal		
Layers:	Single-phase	Multi-phase		
C. of the con Transic	П <b>р</b>	[] Tota	Σ71 m1.	Other (and lain)
Container Type:	∐ Drum	Tote	⊠ Truck	Other (explain)
Container Size:	and the square for the same	***************************************	<u>4000</u>	-
Engage	☐ Weekly	Monthly [	Quarterly	□ Voambu
Frequency:		•		☐ Yearly
Number of Units (co		Other:	<del></del>	FOR RECYCLE
Texas State Waste C	Code No: OUTSIG	7h H	D007, D	1004
Proper U.S. DOT Sh	ipping Name:	Waste corrosive liqu	uids, n.o.s. (potas	sium hydroxide)
Class: 8	UN/NA	: UN1760	PG: II	RQ: 1000
V1435. 0	UNINA		10. 11	——————————————————————————————————————
			-	
Flack Daint	T _n u	Panativa Sulfidan	Den-Alers C	Land Calid
Flash Point	pH 12-14	Reactive Sulfides NAmg/I	Reactive C NAmg/I	
>150		<del></del>		0-2%
Oil&Grease	TOC	Zinc	Copper	Nickel
NAmg/I	NAmg/I	NAmg/I	NAmg/I	NAmg/I

#### SECTION 4: Physical and Chemical Data

Concentration Ranges are acceptable	Units or %
75-80	%
20-25	%
1-2	%
	<del></del>
	Ranges are acceptable   75-80   20-25

#### **SECTION 5: Safety Related Data**

If the handling of this waste requires the use of special protective equipment, please explain. Standard PPE for high pH materials w/ sulfides

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package. None

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any):

None Known Acids

#### SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals:	2
TCLP Volatiles:	2
TCLP Semi-Volatiles:	2
Reactivity:	2
Corrosivity:	2
Ignita bility:	2

#### SECTION 9: Generator's Certification

The information contained herein is based on generator knowledge and/or analytical data. I hereby certify that the above an attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materia

difficulty of composition properties exist and that all known of suspected hazards have	e been disclosed,	i certify that the mate
tested are representative of all posterials described by this document.		•
Authorized Signature:	Date: 1-21-08	
Printed Name/Title: Rory Hebert/Field Environmental Scientist		

CES USE ONLY (DO NOT WRIT	E IN THIS SPACE)
Compliance Officer: Pol	hendland
Date: 1-22-08	Approved Rejected
Approval Number:	2598

OK to mix with Devider Courte Only! Any hydrocarbons on top of load put into hydrocarbon mixture totes. To QC: Sp Gr., % suspended solids, pH, and a visual for oil and grease (no oil or grease allowed). Also determine the % caustic by either titration to pH 4 or by using Sp. Gr., and the "handy math calculation" - see shared drive. Sulfides must be low. QC - If solids <.75% & caustic >7% (by Sp.Gr.; 5% by titration), load in De Ridder trlr. If there are no De Ridder trlrs, load into De Ridder frac tank. If solids <.75%

& canadie <7%, put in RO tank and participation 100 higher filter before putting in RO tank fig. (add for solids > .75% + trucking + FSC.

EPAHO041000271

### SECTION 10: Waste Receipt Classification Under 40 CFR 437 Is this material a wastewater or wastewater sludge? YES ⊠ NO If 'Yes', complete this section. PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE. Metals Subcategory: Subpart A Spent electroplating baths and/or sludges Metal finishing rinse water and sludges Chromate wastes Air pollution control blow down water and sludges Spent anodizing solutions Incineration wastewaters Waste liquid mercury Cyanide-containing wastes greater than 136 mg/l Waste acids and bases with or without metals Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations Vibratory deburring wastewater Alkaline and acid solutions used to clean metal parts or equipment Oils Subcategory: Subpart B Used oils Oil-water emulsions or mixtures Lubricants Coolants Contaminated groundwater clean-up from petroleum sources Used petroleum products Oil spill clean-up Bilge water Rinse/wash waters from petroleum sources Interceptor wastes Off-specification fuels Underground storage remediation waste Tank clean-out from petroleum or oily sources Non-contact used glycols Aqueous and oil mixtures from parts cleaning operations Wastewater from oil bearing paint washes Organics Subcategory: Subpart C Landfill leachate Contaminated groundwater clean-up from non-petroleum sources Solvent-bearing wastes Off-specification organic product Still bottoms Byproduct waste glycol Wastewater from paint washes Wastewater from adhesives and/or epoxies formulation Wastewater from organic chemical product operations Tank clean-out from organic, non-petroleum sources

(1)	If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.
(2)	If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in exces

of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L Chromium: 8.9 mg/L

Copper: 4.9 mg/L Nickel: 37.5 mg/L

(3)	If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, o
	nickel above any of the values listed above, the waste should be classified in the organics subcategory.

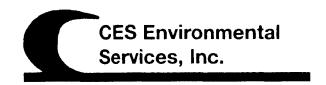
☐ Metals Subcategory

Oils Subcategory

Organics Subcategory

#### **SECTION 11: Additional Instructions**

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

Date: 01/17/08

To: Matt Bowman Cc: Gary Lenertz

From: Miles Root Lab Memo: 08-008

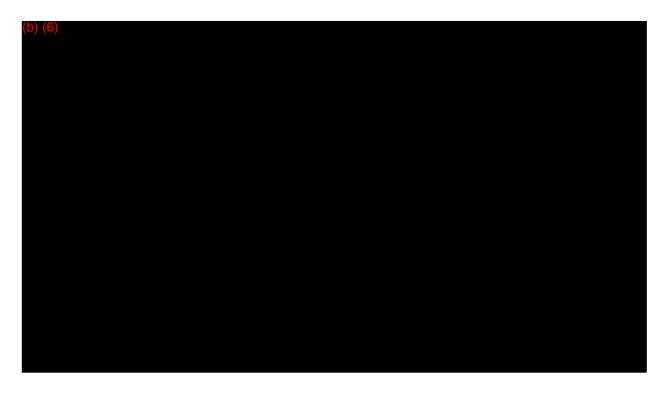
Subject: Enterprise KOH Stream - Sample Evaluation 0108-35

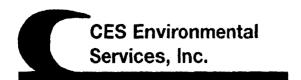
A sample of potassium hydroxide from Enterprise Products, Port Allen, LA has been evaluated as a potential sale to Deridder. The sample is dark from suspended particulates, but contains no oils by centrifuge. Solids by centrifuge are approximately 1.5 vol%. The sample also has an odor of ammonia. The KOH concentration was determined by titration to pH 7.0 with the MW of 56 used instead of the 40 as used for NaOH samples.

A summary of the test results follows:

Specific Gravity – 1.203 @ 15.5 deg C KOH – 20.7 wt%
Oil, by centrifuge – none detected Solids, by centrifuge – 1.5 vol%
Sulfides – present
Ammonia odor present in sample.

As a side note, the CRC Handbook lists the percentage of a pure KOH solution in water as 22.0 wt% with a density of 1.2035 @ 20 deg C, indicating that our testing method is not too far off.





4904 Griggs Road Houston TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1460

## **Material / Product Approval Letter**

Date 1/25/2008

Dear Grace Dean

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2602

Expiration Date 1/25/2010

Producer: Arkema, Inc.

Address: 2231 Haden Road

Houston, TX 77015

Material / Product Information

Name of Material / Product Recyclable caustic soda

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

Scrubber process

Color: Clear dark amber Odor: strong pH: 14

**Physical State:** 

**Incompatibilities:** Reacts violently or explosively with water, acids, and organic

materials, carbon monoxide can from upon contact with food or

beverage products

Safety Related Data/Special Handling:

Where there is a potential for leye contact, wear a face shield, chemical goggles, and have eye flushing equipment available. Wear appropriate chemical resistant protective clothing and chem9ical resistant gloves to prevent skin contact. Avoid breathing

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. JAN-23-2008 13:11

CES Environmental Svcs.

JB





4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

		_		
	rial Producer Inform	<u>ation</u>		
Company:	Arkema Inc.	<del></del>		
Address:	2231 Haden Rd. Houston, TX 7701	5		
City, State, Zip: Contact:	Grace Dean	J	Title:	
Phone Nor	(713) 450-6746		Fax No:	
24/hr Phone:	(800) 424 9300		FAX NO	
U.S. EPA I.D. No:	Tx000749 00		<del>-</del> -	
State I.D.	30503	<u> </u>	SIC Code:	NA
State from	70107		510 0000	1071
SECTION 2: Billin	r Information — 🗍 9	iama es Ahava		
Company:	Arkema Inc.	HAIRE BY WOOAC		
Address:	2231 Haden Rd.		<del></del>	
City, State, Zip:	Houston, TX 77015		<del></del>	
Contact:	Brantley Moonyham	Title:		
Phone No:	(713)450-6746	Fax No:		
Filmic 140.	(113)30-0144	FAX INU,		
SECTION 3: Gener	al Description of the	Mujarial / Product		
SECTION S. SERV	at Description of the	, more than the		
Name of Material / I	Product: Recycleable	e Caustic Soda		
		ing or Producing the Ma	terial / Product: So	crubber process
•				
Physical State:	🛛 Liquid	Studge	Powder	
-	Solid	Filter Cake	Combination	
			Comodination	
Color: Clear dark am	ber C	dor: Strong		
Color State Carle	<del></del>	A COLUMN TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL TH		
Specific Gravity (wa	tarm1): 1.000	Density 0.09 (be/out		
Specific Oravity (wa	100 -1). <u>1.070</u>	Density: 9.08 lbs/gal		
Layers:	Single-plase	Multi-phase		
Layers.	52 ougle-birese	The menti-husas		
Containou Tumas	[] Dunama	C) T-4-	<b>5</b> 77	
Container Type:	∐ Drum	Tote	Truck	Other (explain)
Container Size:		******	<u>5000 qal</u>	· · · · · · · · · · · · · · · · · · ·
Frequency:	Weekly	☐ Monthly	Quarterly	Yearly
Number of Units (co		Other:	Controlly	tenty
Humber of Dans (Co	mainers). 2-3	) Uther:		
		moduct -		
Proper U.S. DOT Sh	ipping Name:	UN 2924, Flamma	ble Liquid. Corrosis	ve. n.o.s., 3, PG II
Class: 3	UNIN	A: UN 2924	PG: PG	II RQ: NaOH 1000#
		والتكاف أسمواجين بالبها المساكب والمها	-	
Flash Point	T and	N/A	- T31/4	
70 F → 150 f	pH 14	N/A	N/A	Solids
Oil&Grease	TOC	Zine	7 6-2-2	1%
Omg/l	15000mg/I	Zinc   Omg/l	Copper	Nickel
XE.	1 10000mE/1	T Zuiku	Qrag/l	Qmg/l

24.01

F.02 P.3

JAN-23-2008 13:11

CES Environmental Svcs.

7137488664

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Carbon Disulfide	<.1	%
Sodium Hydroxide	10-15	%
Water	85-90	%
		1

#### SECTION 5: Safety Related Data

If the handling of this material / product requires the use of special protective equipment, please explain.

Where there is a potential for eye contact, went a face shelld, chemical googles, and have eye flushing equipment available. Wear apportate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Avoid breathing vapor or mist.

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. MSDS

#### SECTION 7: Incompatibilities

24.00

Please list all incompatibilities (if any):

Reacts voilently or explosively with water, acids and organic materials, carbon monoxide can form uppn contact with food or beverage products.

#### SECTION 8: Material Producer's Certification

The information contained herein is based on $\square$ generator knowledge and/or $\boxtimes$ analytical data. I hereby certify that the above and
attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful
omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials
tested are representative of all materials described by this document.
1108
Authorized Signature: Lewy Frence Date: 1-24-08
Printed Name/Title: TERRY FREEMAN / SITE MONAGER
Printed Name/Title: [ETUDY FILEEMAN] 71 1E WIDS 4.6672

CES USE ONLY (DO NOT WRITE) IN THIS SPACE) Process Facility Information: \$1.54/941 FSC 20% LADINOP & SNANT Approved Rejected Demerragetrothe 2607 Approval Number:

TOTAL P.02

- PE 1911

- A CONTRACTOR

#### Caustic Soua, Simplifient Grade

Material Safety Data Sheet

#### Arkema Inc.

# ARKEMA

#### 1 PRODUCT AND COMPANY IDENTIFICATION

Thio and Fine Chemicals

Arkema Inc.

2000 Market Street

Philadelphia, PA 19103

**EMERGENCY PHONE NUMBERS:** 

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 767-5089 (24Hrs)

Information Telephone Numbers

Phone Number

Available Hrs

**Customer Service** 

1-800-628-4453

8:30 to 5:30 EST

Product Name

Caustic Soda, Shipment Grade

Product Synonym(s)

Chemical Family

Alkali

Chemical Formula

NAOH

Chemical Name

Sodium Hydroxide

EPA Reg Num Product Use

#### 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Carbon disulfide	75-15-0	<0.1%	Υ
Sodium hydroxide	. 1310-73-2	10-15%	Υ
Water	7732-18-5	85-90%	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

#### 3 HAZARDS IDENTIFICATION

#### **Emergency Overview**

Orange slightly turbid liquid with foul odor.

DANGER!

FLAMMABLE LIQUID AND VAPOR.

CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS. MAY CAUSE BLINDNESS.

CAUSES SEVERE DIGESTIVE TRACT BURNS.

EVEN DILUTE SOLUTIONS MAY CAUSE BURNS.

#### **Potential Health Effects**

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. This material is a strong alkali that can be destructive to tissue producing severe burns which are not immediately painful or visible. Contact with body tissues may produce deep ulceration, scarring or loss of sight. Concentrations as low as 2-3% can cause injury. Dermatitis (inflammation of the skin) and superficial skin damage can result from repeated or prolonged contact with very dilute solutions. High levels of dust or mist may be corrosive to mucous membranes producing eye or lung injury and chemical pneumonia. Lower concentrations may produce irritation of eyes, nose or upper respiratory tract with coughing, sore throat and shortness of breath. Prolonged exposure may result in ulceration of the nasal passages. If swallowed, this material may cause severe internal injury, characterized by pain in the mouth

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#### Arkema Inc.

and stomach, vomiting, and breathing difficulties. Medical conditions which may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

#### 4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### 5 FIRE FIGHTING MEASURES

#### **Fire and Explosive Properties**

Auto-Ignition Temperature

NE

Flash Point

70 F - >150 F

Flash Point Method

Flammable Limits- Upper

NE

Lower

ΝE

#### Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

#### Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

#### Fire and Explosion Hazards

Contact with metal can form hydrogen gas. Hydrogen is extremely flammable and can form explosive mixtures with air. Closed containers may explode when heated or contents contaminated with water.

#### **6 ACCIDENTAL RELEASE MEASURES**

#### In Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Contain, vacuum up, place in non-sparking container for disposal. Prevent waterway contamination. Construct a dike to prevent spreading. Collect runoff and transfer to drums or tanks for later disposal. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

#### 7 HANDLING AND STORAGE

#### Handling

Do not get in eyes, on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. To avoid rapid temperature rise, violent spattering, or explosive eruptions: always add caustic to water when mixing. Never add water to a caustic when mixing. Heat water to 80-100 F before adding product. Add small amounts of product slowly and evenly over surface of water with constant stirring. Never increase concentration of product by more than 5% with any single

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Material Safety Data Sheet





#### 7 HANDLING AND STORAGE

addition. Water should not exceed 160 F during addition.

#### Storage

Do NOT store near strong acids.

#### 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Engineering Controls**

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

#### Eye / Face Protection

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

#### **Skin Protection**

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

#### **Respiratory Protection**

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

#### Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value	
Sodium hydroxide			
ACGIH CEILING	-	2 mg/m3	
OSHA TWA PEL	-	2 mg/m3	
Carbon disulfide			
ACGIH Skin designator	•	Υ	
ACGIH TWA		1 ppm	
OSHA Ceiling PEL	•	30 ppm	
OSHA TWA PEL	-	20 ppm	

⁻Only those components with exposure limits are printed in this section.

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⁻Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.

⁻ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.

⁻WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

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#### 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor

Orange slightly turbid liquid with foul odor.

рH

NE

Specific Gravity

1.073 @ 15 C

Vapor Pressure

30 @ 100 F

Vapor Density Melting Point NA

Freezing Point

NA

Roiling Point

NE

Boiling Point

NE

Solubility In Water

99.98%

#### 10 STABILITY AND REACTIVITY

#### **Stability**

This material is chemically stable under normal and anticipated storage and handling conditions.

#### Incompatibility

Reacts violently or explosively with water, acids and organic materials such as chlorinated hydrocarbons. Toxic carbon monoxide gas can form upon contact with food or beverage products.

#### **Hazardous Decomposition Products**

Will react with some metals such as aluminum, tin or zinc to generate hydrogen gas. Hydrogen gas can result in explosive hazards in confined spaces.

#### 11 TOXICOLOGICAL INFORMATION

#### **Toxicological Information**

Data on this material and/or its components are summarized below.

#### Sodium Hydroxide

Single exposure (acute) studies indicate that this material is slightly toxic if absorbed through the skin (rat LD50 1,350 mg/kg; dry sodium hydroxide) and corrosive to rabbit eyes and skin. Many publications in the scientific literature confirm that this material is corrosive to all tissues. Repeated inhalation resulted in lung damage in rats. No tumors were seen in long-term animal studies. No genetic changes were observed in tests using bacteria.

No significant increases in mortality in relation to duration or intensity of exposures were reported in an epidemiologic study of a small group of workers exposed to caustic dust for 30 years or more. Massive ingestion of this material has been implicated as causing esophageal cancer. Squamous cell carcinomas of the esophagus occurred approximately 12-42 years later in individuals who survived accidental childhood ingestion and are likely due to the tissue destruction and possible scarring of the esophagus rather than a direct effect of this material.

#### Carbon Disulfide

Single exposure (acute) studies indicate that this material is slightly toxic to rats if swallowed (LD50 3,188 mg/kg) or rabbits if absorbed through skin (LD50 2,025 mg/kg), practically non-toxic to rats if inhaled (1-hr LC50 40 mg/l), and severely irritating to rabbit skin and eyes. The neurological effects of long-term exposure have been documented in occupational populations who were generally exposed to levels of 20 ppm or more in viscose rayon production. Exposed workers have experienced headaches, nausea, dizziness, tiredness, memory loss, sleep disturbances, irritability and other psychological symptoms in the early stages of intoxication. Long-term exposure has resulted in decreased nerve conduction velocities, memory loss,

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#### 11 TOXICOLOGICAL INFORMATION

peripheral neuropathy (numbness) in the lower legs and forearms, tremors, poor coordination and personality disorders. In addition, several studies have shown adverse effects on the heart including increases in atherosclerosis, death from coronary or ischemic heart disease and blood pressure. Other studies have indicated that long-term overexposure can cause adverse effects on the eyes including increased hemorrhages or microaneurysms of the retina. Studies of occupationally exposed workers have suggested that long-term exposure to higher levels may cause reproductive effects. Male workers had decreased libido, reduced sperm count and altered endocrine function and female workers reported menstrual irregularities. Sperm from exposed workers have shown alterations indicative of spermatogenic damage. There is conflicting evidence whether increased pregnancy complications and a higher frequency of spontaneous abortions are related to exposures in female workers.

Animal studies have confirmed neurological effects. Rats exposed for long periods to high levels showed decreased motor conduction velocity, hindlimb motor defects, peripheral nerve swelling and degeneration. Repeated exposure of monkeys has resulted in reduced visual acuity. Following inhalation exposure in male rats, minor reproductive effects such as decreased sperm counts and abnormal mating behavior, but no pathological changes were noted in testes. A two-generation reproduction study in exposed female rats showed no reduction in fertility, but mothers exposed to high dose levels had reduced pup viability. Multiple developmental toxicity studies in rats and rabbits have presented evidence of increased birth defects and embryotoxicity at high dose levels; however, exposures at levels that are not maternally toxic generally do not cause birth defects, although developmental effects have been observed. No genetic changes were observed in tests using bacteria, but have been observed in animal cells.

#### 12 ECOLOGICAL INFORMATION

#### **Ecotoxicological Information**

Data on this material and/or its components are summarized below.

#### Sodium Hydroxide

Data from several species of fish showed a range of tolerance (brook trout > spotfin and Lake Emerald shiners > minnows > mosquitofish > goldfish) that was most likely related to changes in the pH produced by addition of sodium hydroxide to the water. The minimum lethal concentration for minnows, Mayfly larvae and Daphnia was 100 ppm and for Chironomus larvae, 700 ppm.

#### Carbon Disulfide

This material is moderately toxic to Daphnia magna (LC50 2.1 mg/l). It is moderately toxic to guppies (LC50 4 mg/l) and slightly toxic to green algae (LC50 21 mg/l). It is practically non-toxic to mosquitofish (LC50 135 mg/l) and bacteria (LC50 341 mg/l).

#### **Chemical Fate Information**

Data on this material and/or its components are summarized below.

#### Sodium Hydroxide

No data were available, but this material is a strong alkali that easily dissolves in water with resulting acid/base chemistry.

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#### 13 DISPOSAL CONSIDERATIONS

#### **Waste Disposal**

Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual materials. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

#### 14 TRANSPORT INFORMATION

**DOT Name** 

Flammable Liquid, Corrosive, NOS

**DOT Technical Name** 

(Sodium Hydroxide; Carbon Disulfide)

**DOT Hazard Class** 

3.8

**UN Number** 

UN 2924

**DOT Packing Group** 

PG II

RQ

Sodium Hydroxide 1000# (dry basis); Carbon

Disulfide 100#

**DOT Special Information** 

Subsidiary hazard: 8 Corrosive

On a waste manifest, add the word "Waste"

#### 15 REGULATORY INFORMATION

#### Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health Y

Fire

Delayed (Chronic) Health N

Reactive

N

Sudden Release of Pressure N

The components of this product are all on the TSCA Inventory list.

#### **Ingredient Related Regulatory Information:**

**SARA Reportable Quantities** 

CERCLA RQ

SARA TPQ

Sodium hydroxide

1000 LBS

Water

NE

Carbon disulfide

100 LBS

10000 LBS

#### SARA Title III, Section 313

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Carbon disulfide

#### SARA Title III, Section 302

This product does contain chemical(s), as indicated below, currently on the Extremly Hazardous Substance List, Section 302, SARA Title III. See Section 2 for further details regarding concentrations and registry numbers.

Carbon disulfide

#### California Prop 65 - Developmental Toxin

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins. Carbon disulfide

#### Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance

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Material Safety Data Sheet





#### Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Carbon disulfide

Sodium hydroxide

#### **New Jersey Right to Know**

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Carbon disulfide

Sodium hydroxide

#### Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Carbon disulfide

Sodium hydroxide

#### Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Carbon disulfide

Sodium hydroxide

#### **16 OTHER INFORMATION**

#### **Revision Information**

Revision Date

23 FEB 2007

Revision Number 6

Supercedes Revision Dated

07-NOV-2006

#### **Revision Summary**

Moved from Retired to Active 03.

#### Kev

NE= Not Established NA= Not Applicable (R) = Registered Trademark

## Miscellaneous

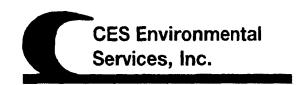
NOTE: Toxic carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and cause death.

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FRACK #3 (21745)	TRACK	#2 (2174	FRACK #3 (21745) TRACK #2 (21744)				
CAR#	Spot #1			Spot #1	1		
	Car # UTLX 901311		Load		utlx 901317	unload	
	IP				IP		
	NDM		20 MG		ndm		
	Lot#	Wt.		Lot#	,	Wt.	
	Spot #2			Spot #2	2		
	Car #			Car #	UTLX 901320	load	
					IP		
	Lot#	Wt.		Lot#	, , , , , , , , , , , , , , , , , , ,	Wt.	
	Spot #3			Spot #3	3		
	Car # GATX 81893			Car#	CPCX 206121		
	<u> </u>						
	TETRAMER		30 MG		DODECENE	30 MG	
	Lot#	Wt.	184,954	Lot#	1	Wt. 175,350	
	\			Spot #4	4		
	Car#			Car#			
	PURG	E/REPAIF	RONLY	,	PURGE/RE	PAIR ONLY	
	_						
	Lot#	Wt.		Lot#	,	Wt.	
	Spot #5			Spot #	5		
	Car #	<del>,,,,,</del>		Car#			
	PURG	E/REPAIF	RONLY		PURGE/RE	PAIR ONLY	
	Lot#	Wt.		Lot#	,	Wt.	
	Spot #6			Spot #6			
	Car#			1			
		<del></del>		-			
	PURGE OF	NLY			PURGE ONLY		
n plant: Control Room	: 713-450-5870 or 713-4	450-5887		LEAD			
MERGENCY CONTA	CT·						
	ger: 888-487-5997 / Ce	II: 713-30	4-7037				
Grace Dean - Cell: 71	3-838-5920						

TRACK WORK	SCHEDULE			Date: 11/5/20	007	
TRACK #3 (21745)	TRACK	#2 (21744	·)		TRACK #1 (2174)	3)
CAR#	Spot #1			Spot #1		
	Car # UTLX 901311		Load	Car# utlx 90	)1317	unload
	IP.			-	IP	
	NDM	÷	20 MG	ndm		
	Lot#	Wt.		Lot#	Wt.	
	Spot #2			Spot #2		
	Car#			Car # UTLX	901320	load
				-	IP	
	Lot#	Wt.		Lot#	Wt.	
	Spot #3			Spot #3		
	Car # GATX 81893			Car# CPC	〈 206121	
	·					
	TETRAMER		30 MG	DODE	CENE	30 MG
	Lot#	Wt.	184,954	Lot#	Wt.	175,350
	\			Spot #4		
	Car#			Car#		
	PURG	E/REPAIR	ONLY		PURGE/REPAIR	ONLY
	Lot#	Wt.		Lot#	Wt.	
	Spot #5			Spot #5		
	Car #			Car #	·	
	PURG	E/REPAIR	ONLY		PURGE/REPAIR	ONLY
				ļ		
	Lot#	VVt.		Lot#	Wt.	
	Spot #6			Spot #6		
	Car #			Car #		
	PURGE ON	NLY	and the second s	Pl	JRGE ONLY	
In plant: Cantal Dagge	. 742 450 5970 740 4	1E0 E007		LEAD		-
In plant: Control Room:		1886-UC+				
EMERGENCY CONTAC		II. 740 00 <i>1</i>	7027			
James Wheeland - Pag Grace Dean - Cell: 713		н: 713-304	-1037			
	<del></del>					



# Waste Pre-Acceptance/Approval Letter

Date 3/11/2008

Dear Randy Woolvine

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2641

Expiration Date 3/11/2010

Generator: Citgo Accounts Payable @ Lake Charles

Address: P. O. Box 600

Lake Charles, LA 70602

Waste Information

Name of Waste: Naphthenic caustic

TCEQ Waste Code #: Product

Container Type: Barge possible

**Detailed Description of Process Generating Waste:** 

Treating of kerosene and jet fuel w/caustic to remove sulfur compounds

Color: Medium dark Odor: Characteristic Naphthe pH: >12.0

**Physical State:** 

Incompatibilities: Strong acids

Safety Related Data/Special Handling:

PPE, gloves, glasses/goggles

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.

rester water Must be heated then to remove scrub phane 49

CES Environmental Services, Inc.

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948

U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Materi				· · · · · · · · · · · · · · · · · · ·
Company:	Citao let	roleum Corpor	cyppy	· · · · · · · · · · · · · · · · · · ·
Address:	<u> </u>	Box 600		
City, State, Zip:	Lake Ch	water LA	70607	
Contact:	Randy Wor	il wine	Title: _	Purchasing Agent
Phone No:	- 1	3-8274	Fax No:	337-708-6289
24/hr Phone:				
U.S. EPA I.D. No:	NIA			
State I.D.	NIA		SIC Code:	NIA
•		······································		_/V // <del>/</del> /
SECTION 2: Billing Company:	Information – Sa	me as Above		
City, State, Zip:	· · · · · · · · · · · · · · · · · · ·			
Contact:		Title:		
Phone No:		Fax No:		· · · · · · · · · · · · · · · · · · ·
		1 MA 110.		
SECTION 3: Genera	al Description of the l	Material / Product		
Name of Material / Properties of Description	roduct: <u>Nop</u> H of Process Generation	enic Caush	C sterial / Product:	Treating of kerosene and Jet fuel w/ caustic
		8	_	= -
				Jet the W/ caushe
Physical State:	Liquid	Sludge	Powder	to remove suffer compounds
i ny sieur seure.				compounds
	☐ Solid	Filter Cake	Combination	Y
Color: med dar	K od	lor: <u>Characteris</u> t	ic Napthenic	acid
Specific Gravity (wat	er=1): <u>1.10</u>	Density: 8-9 lbs/ga	al	
Does this material con	ntain any total pheno	olic compounds? 🗹 Y	es 🗌 No	
Does this material con	ntain any para substi	tuted phenolic compo	unds? 🗆 Yes 🗆	] No
Layers:	Single-phase	☐ Multi-phase		
Container Type:	☐ Drum	☐ Tote	Truck	(Other (avalein)
· -	ווווווווו	Tote	<b>□</b> Iruck	Other (explain)
Container Size:			<del></del>	Barge Possible
	,			
Frequency:	Weekly	☐ Monthly	Outputouls:	□ Vacady
• •		•	Quarterly	Yearly
Number of Units (con	-	Other:		
	Ph	odut		
Proper U.S. DOT Shi	nning Nama			
rroper o.s. Dor Sin	hhing manie:	Corrosive	liquids N.	O.S. (Naphthenic acidsalts)  RQ: mail
Class: 8	UN/NA	1760	PG:	RQ: 1000

Flash Point	bH ≥ 19:0	N/A	N/A	Solids
Oil&Grease	TOC	Zinc	Copper	Nickel
mg/1 5-7%	mg/l /1//	2. 1 <u>AM-</u> mg/l	<u> </u>	<u></u>

## SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Snelieum eterdopæide	2 12.	100
Nachteus acrd 53145	0-6	0,0
Petreology Detillates	0-1	10/0
mixed cresulic acid salts	0-2	0/6
Witten	Balant	9,

Trucket	1 31/21/4/ V	<del></del>
CTION 5: Safety Related Data		
the handling of this material / product requires the use of special prote	ective equipment, please expla	ıin.
- PPE, Gloves, Slesses/Goggles		
SECTION 6: Attached Supporting Documents		
List all documents, notes, data, and/or analysis attached to this form as p	art of the material / product	profile.
$$ $N_{IP}$		
SECTION 7: Incompatibilities		
Please list all incompatibilities (if any):		
SECTION 8: Material Producer's Certification	, see a	
The information contained herein is based on generator knowledge and/outtached description is complete and accurate to the best of my knowledge missions of composition properties exist and that all known or suspected hereted are representative of all materials described by this document.	ge and ability to determine the hazards have been disclosed,	at no deliberate I certify that t
Authorized Signature: Kandy WOOLUINE PURI AHA STAKE	Date: <u>03/</u> 05/06	<u>,                                     </u>
rinted Name/Title: RANIDY WOOLLULATE PLACE AND STAKE	PROVI	
CES USE ONLY (DO NOT WRITE IN THIS SPACE)		<del></del>
1/ A		

CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Technical Manager: Lebenthy &	
Date: 3 11-08 Approved Rejected	<del>-</del>
Approval Number: 2-641	



### CERTIFICATE OF ANALYSIS | 62376.01

1of 1

Customer: CES Env. Svcs. Project ID: Citgo LC Sample ID: Naphthenic Caustic 09-28-07 Environ ID: 62376.01 Sampled: 09-28-07

Project Loc: LC, LA Charge/P.O.: Matrix: Waste Water Type: Grab RECEIVED BASIS Received: 10-01-07 Reported: 10-05-07

ANALYTE/ PARAMETER	RE	SULT	UNITS	REG.	MQL	TEST METHOD	ANALYST	DATE	TIME
Caustic As NaOH	l	1.9	Wt.%	<u> </u>	0.1	EPA 600.310.1	OLC	10-03-07	07.00
Phenolics		2,790	mg/l	-	0.05	EPA 600.625	LC	10-04-07	10:00
Benzene METALS (RCRA) - TCLF	•	1.94	mg/l		0.01	SW846.8021B SW846.1311	DMB MN	10-02-07 10-01-07	16:52
Arsenic		0.9	mg/l	5.00	0.2	SW846.6010B	JK	10-03-07	13:20
Berium		0,5	nng/f	100	0.2	SW846.6010B	JK	10-03-07	13:20
Cadmium	<	0.2	mg/l	1.00	0.2	SW846.6010B	JK	10-03-07	13:20
Chromium	<	0.2	mg/l	5.00	0.2	SW846.6010B	JK	10-03-07	13:20
Lead	<	0.2	mg/l	5.00	0.2	SW846.6010B	JK	10-03-07	13:20
Nickel	<	0.2	mg/l	70.00	0.2	SW846.6010B	JK	10-03-07	13:20
Selenium	<	0.2	mg/l	1.00	0.2	SW846.6010B	JK	10-03-07	13:20
Silver	<	0.2	mg/t	5.00	0.2	SW846.6010B	JK	10-03-07	13:20
Zinc	<	0.2	mg/i	-	0.2	SW846.6010B	JK	10-03-07	19:20
Mercury		0.018	mg/l	0.200	0.002	SW846,7470A	MN	10-02-07	12:00

Definitions:

REG - Regulatory Limit (User Should Confirm Limits)

MQL - Method Quanitation Limit

PPM - Parts Per Million

mg4 - PPM by Volume, mg6:g - PPM by Weight

John Keller

John Ketler, Ph.D Laboratory Director



1.	Base Pricing (including freight):
	- Transportedon et 14/gal.
	- Transportetion et 14/gal Material management e 1.41/gallon
2.	Contamination Limits (maximum limit before surcharges apply):
	NIA
3.	Surcharge Pricing:
	NIA
4.	Special Testing Requirements:
	- Run treatebility as below listed;
	h #5
	Test water phase for TSS, pH, phenols 4-4
5.	Treatment and Handling Protocol: the bottom water must be heated to remove lights; be Newly  - Break emulsion by adjusting to a pH of x to at least less than a 4.0
<u></u>	- Break emulsion by adjusting to a pH of x to at least less than a 4.0 - segregate oil into a dedicated storage tent / tentere onsit
>	- segregate oil into a dedicated storage tent /tentere onsite  - segregate oil into a dedicated storage tent /tentere onsite  - segregate oil into a dedicated storage tent /tentere onsite  - segregate oil into a dedicated storage tent /tentere onsite  - segregate oil into a dedicated storage tent /tentere onsite  - water will continue to drain /settle out of the product. Be  - sure to drain water off product storage trailer as it will  be corrosive.
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory C

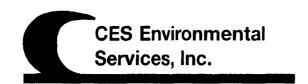


## 7. Tests for Product Recovered/Recycled (if applicable):

This material will be sold to Eugean or chinese markets & Be sure to drain water off bottom of traiter

## 8. Management for Product Recovered/Recycled (if applicable);

This material should be segregated into a dedicated product storage traiter. Water should continuously by drained from the traiter. We will ship the naterial (via rented Iso) to Europe or China.



# **Material / Product Approval Letter**

Date 3/31/2008

Dear Patricia Hicks

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2674

Expiration Date 3/31/2010

**Producer:** International Diamond Services

Address: 3420 Pinemont

Houston, TX 77018

Material / Product Information

Name of Material / Product Scrubber caustic solution

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

Spent caustic from scrubbers

Color: clear to brown Odor: pungent pH: 12-14

**Physical State:** 

Incompatibilities: acids, oxidizers
Safety Related Data/Special Handling:

std PPE (suite)

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. this waste is a than Marke Cl Se

Dood + Dood Phone: (713) 676-1

this would have to http://www.

be recycle. Call G. Landy. TCEO Industry

## **CES Environmental** Services, Inc.

Phone: (713) 676-1460

Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948

U.S. EPA ID No: TXD008950461 **ISWR No: 30900** 

SECTION 1: Materi					
Company:	International Diamo	nd			
Address:	3420 Pinemont				
City, State, Zip:	Houston, TX 77018		(D) A)		
Contact:	Patrica Hicks	Later Later Annual Control of the Co	Title:		
Phone No:	(713) 681-5485		Fax No:		
24/hr Phone:	TXR000027573		water-		
U.S. EPA I.D. No:	20710		SIC Code:	n/a	
State I.D.	20/10		SIC Code.	11/ a	
SECTION 2: Billing Company: Address:	Information – 🔀 Sa	ame as Above			
City, State, Zip:		Title:			
Contact:		Fax No:			
rnone No:		FAX NO.		<del></del>	
SECTION 3: Genera	al Description of the	Material / Product			
SECTION 5. Genera	ii Description of the	Material / Troduct			
Name of Material / P Detailed Description		ustic Solution ng or Producing the Ma	nterial / Product: s	spent caustic	from scrubbers
	57				
Physical State:	∠ Liquid	☐ Sludge	Powder		
	☐ Solid	☐ Filter Cake	Combination	1	
Color: clear to brown	O	dor: pungent			
Specific Gravity (wat	er=1): <u>1.1</u>	Density: 9.2 lbs/gal			
Does this material co	ntain any total phen	olic compounds? 🗌 Y	es 🛛 No		
Does this material co	ntain any para subst	tituted phenolic compo	unds? 🗌 Yes 🏻 🗵	☑ No	
Layers:	<b>⊠</b> Single-phase	Multi-phase			
Container Type:	☐ Drum	☐ Tote		П	Other (explain)
Container Size:	<del></del>	<del></del>	3-5000g		
Container Size.		<del></del>	<u> </u>		
_		— · · · ·	<b>5</b> 7	<b>,</b> ,	
Frequency:	☐ Weekly	<b>Monthly</b>	<b>Quarterly</b>		Yearly
Number of Units (cor	ntainers): 1	Other:			
		Product			
Proper U.S. DOT Shi	ipping Name:	Corrosive liquids.	n.o.s., 8, UN1760, 1	PGII (20% o	caustic)
-				\	
Class: 8	UN/NA	<b>1</b> 760	PG: II		RQ: na

Flash Point	pН	N/A	N/A	Solids
>160	<u>12-14</u>			0%
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>0</u> mg/l	<u>0</u> mg/l	0mg/l	$\underline{0}$ mg/l	<u>O</u> mg/l

## **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE  The material / product consists of the following materials	Concentration Ranges are acceptable	Units or %
sodium hydrosulfide	0-10	%
sodium hydroxide	10-15	%
water	75-90	%
		<u> </u>
		1

## **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. standard PPE (suit)

## **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.  $\underline{none}$ 

## **SECTION 7: Incompatibilities**

Authorized Signature:

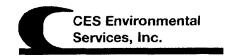
Printed Name/Title: not required

Please list all incompatibilities (if any): acids , Oxid' yers

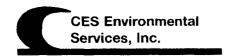
## SECTION 8: Material Producer's Certification

The information contained herein is based on 🖸 generator knowledge and/or 🔲 analytical data. I hereby certify that the above and
attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful
omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials
tested are representative of all materials describted by this document.
$\Gamma$ $\Lambda$

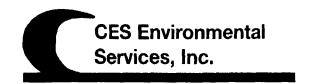
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Technical Manager: Kalbarl Jan A	
Date: 3-31-08 (Approved) Rejected	
Approval Number: 2674	



1.	Base Pricing (including freight):
	\$.405/gal
	\$69/hr trans
	20% fuel surcharge
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
4.	Special Testing Requirements:
	Specific Gravity , to Solids, Sulfides
	% suspended solids
	pH
	visual for oil and grease (NO OIL/GREASE ALLOWED!!)
	Determine % caustic by titration to pH 4 or by using specific gravity and the "Handy Math Calculation" - see shared drive
	Sulfides must be low
_	Tuestment and Handling Duetoesl.
5.	Treatment and Handling Protocol:
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);



## **Material / Product Approval Letter**

Date 4/25/2008

Dear Roy Hebert

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2759

Expiration Date 4/25/2010

**Producer:** Enterprise Products Operating, L.P. - Port Allen

**Address:** 2220 North River Rd.

Port Allen, LA 70767

## Material / Product Information

Name of Material / Product Spent potassium hydroxide (for product recycling)
Container Type:

## **Detailed Description of Process Generating or Producing the Material / Product:**

Reinery grade propylene flows upward through two layers of KOH briquettes. In the presence of oxygen molecule (provided by the water that is injected) COS is converted in some sort of sulfide which is entrained in the melted KOH that gathers in the bot

Color: Dark Odor: Ammonia pH: 12-14

Physical State:

Incompatibilities: Acids

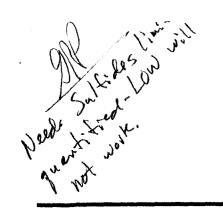
**Safety Related Data/Special Handling:** std PPE for high pH materials with sulfides

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.





# CES Environmental Services, Inc.

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

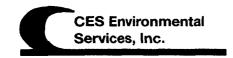
SECTION 1: Mate	rial Draducer Inform	action				
Company:	Enterprise Product		C - Port Allen	1		
Address:	2220 North River		C TOIL TIME!			
City, State, Zip:	Port Allen, LA 70					
Contact:	Rory Hebert			Title:	Field Env	ironmental Scientist
Phone No:	225-381-3459			Fax No:	225-381-3	
24/hr Phone:	225-278-5496				220, 301 :	
U.S. EPA I.D. No:	LAR000033100					
State I.D.	D0022			SIC Code:	مام	
State 1.0.				ore cour.	NA	
SECTION 2: Billin	g Information – 🔲 🤉	Same as Above				
Company:	Enterprise Products		- Port Allen			
Address:	2220 North River Ro	ad				
City, State, Zip:	Port Allen, LA 7076	57	A.,		<del></del>	
Contact:	Rory Hebert		Title:	Field Environ	mental Scie	entist
Phone No:	225-381-3459		Fax No:	225-381-3476		
_			· •			
SECTION 3: Gene	ral Description of th	e Material / Pro	oduct			
through two layers K	of Process Generat OH briquettes. In the which is entrained in t	ing or Producion presents of oxys he melted KOH	ng the Materi gen molecule that gathers in	ial / Product: \ (provided by the state of t	e water that the vessel.	ade propylene flows upward t is injected) COS is converted into Periodically the liquid or spent
Physical State:	⊠ Liquid □ Solid	Sludge Filter Ca	ake [	Powder Combination	n	
Color: dark	(	Odor: ammonia				
Specific Gravity (wa	nter=1): <u>1.203</u>	Density: 10	. <u>03</u> lbs/gal			
Does this material c	ontain any total phe	nolic compound	ls? 🗌 Yes	⊠ No		
Does this material c	ontain any para sub	stituted phenoli	ic compounds	s? 🗌 Yes 🛭	☑ No	
Layers:	Single-phase	☐ Mu	ilti-phase			
Container Type: Container Size:	Drum	Tote		Truck 4000		Other (explain)
Frequency: Number of Units (co		□ Monthl Other PRODUCT	•	Quarterly		Yearly
Proper U.S. DOT SI				quids. n.o.s. (po	otassium hy	droxide)

1

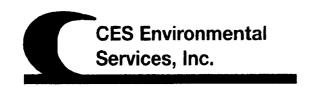
Class: 8	U	N/NA:	UN 1760	PG:	<u>I</u> 1		RQ:	1000
Flash Point	рН 12-14	N/	A	N/A			Solids 0-2%	
Oil&Grease namg/l	TOC namg/l		Zinc namg/l	Copper namg/l		Nickel namg/l		
SECTION 4: Ph	ysical and Chemica	l Data						
TI	COMPONE			A		ncentratio		Units
Water	erial / product cons	ists of t	ne tonowing ma	teriais	75-80	are accep		or %
Potassium Hydro	oxide				20-25			%
Carbon					1-2			0/0
			· · · · · · · · · · · · · · · · · · ·		<del>                                     </del>			
***************************************					<u> </u>	·		
List all document none SECTION 7: Inc	ached Supporting s, notes, data, and/o ompatibilities ompatibilities (if an	or analy	<del></del>	his form as part	of the mat	eriał / prod	duct profi	le.
SECTION 8: Ma	terial Producer's C	<u>ertifica</u>	<u>tion</u>					
attached description omissions of completested are represent Authorized Signa	ontained herein is been is complete and position properties etative of all material ture:  ture:	accurate exist and s describ	e to the best of I that all known bed by this docur	my knowledge a or suspected haz nent.	and ability ards have b	to determin	ne that no	deliberate or will
	NOT WRITE IN THIS	SPACE)						
Technical Manage		Y/z	"Hal					
Date: 4-25-0	8 (	Approve	ed Rejected					
Approval Number:	2750	7						



1.	Base Pricing (including freight):				
	Management: \$0.40/gallon				
	Freight: \$900.00/load				
	Washout: \$150.00 each				
2	Contomination Limits (maximum limit hafana ayyahangaa ayyaha				
2.	Contamination Limits (maximum limit before surcharges apply):				
	Solids must be <0.75% suspended solids; \$.01 per gallon for even 1765, cids one 17670 Extrate. Out gallon for press processing if solids are present.				
3.	Surcharge Pricing:				
	Solids greater than 0.75% - charge additional \$0.15/gallong plus \$600.00/load transportation plus current fuel surcharge				
4.	Special Testing Requirements:				
	Specific Gravity, this par gallon, 7, constic, Sulfides titration pH				
	visual for oil and grease (NO OIL/GREASE ALLOWED!!) - No visible at kyer or oil sheen.				
	Determine % caustic by titration to pH 4 or by using specific gravity and the "Handy Math Calculation" - see shared drive Sulfides must be low				
5.	Treatment and Handling Protocol:				
	CAN ONLY SHIP TO DERIDDER!!				
	If solids are <0.75% and caustic >7% then load in DeRidder tank/trailer				
	If solids are <0.75% and caustic <7% then put in RO tank and perfrom RO If solids are >0.75% and caustic >7% then filter and then put in DeRidder tank/trailer				
	If solids are >0.75% and caustic <7% then filter first and then put in RO tank to perfrom RO				
6.	Treated Wastewater Discharge Subcategory:				
	☐ Subcategory A ☐ Subcategory C				



	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable);



# **Material / Product Approval Letter**

Date 6/4/2008

Dear Bill Glushko

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2804

Expiration Date 6/4/2010

Producer: KMCO, Inc.

Address: 16503 Ramsey Rd.

Crosby, TX 77532

## Material / Product Information

Name of Material / Product SIB product

**Container Type:** 

## **Detailed Description of Process Generating or Producing the Material / Product:**

Caustic washing of reaction product (molten sulfur and sulfurized isobutylene)

Color: idoine/amber Odor: mercaptan/strong pH: 9-13 typical

**Physical State:** 

Incompatibilities: contact w/strong acids will evolve H2S

Safety Related Data/Special Handling:

Rubber boots, rubber gloves, goggles, respirator, chem suit

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. TOC of this maderial is high.

# CES Environmental Services, Inc.

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900 matt Bownar

SECTION 1: Mater	al Producer Information				
Company :	KMCO, Inc.				
Address:	16503 Ramsey Rd. 16	3503 Ramsey Road			
City, State, Zip:	Crosby TX 77532	756			
Contact :	Bill Glushko		Title :	Comments of the Comments of th	- Parket W. P. C.
Phone No :	(281) 328-3501		Fax:	281-328-9528	
24 / HR Phone :			70 mark again		
U.S EPA I.D No:	TXD074198961	22.0	The sale and the s		
State I.D :	31904		SIC Code	2869	
SECTION 2: Billing	Information				
Company :	KMCO, Inc.				
Address :	16503 Ramsey Rd. 16	3503 Ramsey Road			
City, State, Zip :					
Contact :	Bill Glushko		Title :	224 222 2522	
Phone No :	(281) 328-3501		Fax:	281-328-9528	
SECTION 3: Gener	al Description of the Mat	erial / Product			
Name of Mateira	1/Product: 51B	Product			
Detailed Descrip	tion of the Process Ge	enerating or Producing	the Material / Produc	:t:	
•				t:	
•		enerating or Producing		t:	
Caustic washing	of reaction product (mol	enerating or Producing ten sulfur and sulfurized	isobutylene)	rt:	
Caustic washing	of reaction product (mol	enerating or Producing ten sulfur and sulfurized	isobutylene)  Powder	r <b>t:</b> mercaptan/st	rong
Caustic washing of Physical State:	of reaction product (mol-	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake	isobutylene)  Powder  Combination		rong lbs / gal
Caustic washing of Physical State:  Color: Specific Gravity	of reaction product (mol-	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake  iodine/amber  1.37	Powder Combination  Odor:	mercaptan/st	
Caustic washing of Physical State:  Color: Specific Gravity Does this material	of reaction product (mol- Liquid Solid (Water=1):	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake  iodine/amber  1.37	Powder Combination  Odor: Density:  Yes  No	mercaptan/st	
Caustic washing of Physical State:  Color: Specific Gravity Does this material	of reaction product (mol- Liquid Solid (Water=1):	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake  iodine/amber  1.37 ic compounds?	Powder Combination  Odor: Density:  Yes  No	mercaptan/st 11.4	
Caustic washing of Physical State:  Color: Specific Gravity Does this material Does this material	contain any total phenol contain any para substit	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake  iodine/amber  1.37 ic compounds?  uted phenolic compounds  Multi-Phase	Powder Combination  Odor: Density:  Yes  No	mercaptan/st 11.4 ☑ No	
Caustic washing of Physical State:  Color: Specific Gravity Does this material Does this material Layers:	contain any total phenol contain any para substit	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake  iodine/amber  1.37  ic compounds?  uted phenolic compounds  Multi-Phase	Powder Combination  Odor: Density: Yes Yes Yes Yes	mercaptan/st 11.4 ☑ No	
Caustic washing of Physical State:  Color: Specific Gravity Does this material Does this material Layers: Container Type:	of reaction product (mol- Liquid Solid  (Water=1): contain any total phenol contain any para substite Single-Phas Drum 5000	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake  iodine/amber  1.37  ic compounds?  uted phenolic compounds  Multi-Phase	Powder Combination  Odor: Density: Yes Yes Yes Yes	mercaptan/st 11.4 ☑ No	
Caustic washing of Physical State:  Color: Specific Gravity Does this material Does this material Layers: Container Type: Container Size:	contain any total phenol contain any para substitus  Single-Phas  Drum  5000  10	enerating or Producing ten sulfur and sulfurized  Sludge Filter Cake  iodine/amber  1.37 ic compounds?  uted phenolic compounds  Multi-Phase  Tote  Tri	isobutylene)  Powder Combination  Odor: Density: Yes Yes Yes Other (exp	mercaptan/st 11.4 ☑ No	lbs / gal

	Flash Point >150	pH 9-13 typical	Reactive Sulfides 00-2500 typicamg/l	Reactive Cyanides <20 mg/l	<b>Solids</b> 0-1 %
ſ	Oil and Grease	тос	Zinc	Copper	Nickel
١	<100 mg/l	<2500 mg/l	na mg/l	na mg/l	na mg/l

## SECTION 4: Physical and Chemical Data

SECTION 6: Attached Supporting Documents

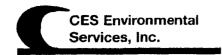
COMPONENTS TABLE.  The material / product consists of the following materials	Concentration  Ranges are acceptable	Units or %
water	70-90	%
sodium hydroxide	2-15	%
sulfurized salts; sulfides and solids	2-15	%
sulfurized isobutylene	0-2	%
NaHS	3-5	%

The material product concluse of the following materials	Tangoo are accoptable	0. 70
water	70-90	%
sodium hydroxide	2-15	%
sulfurized salts; sulfides and solids	2-15	%
sulfurized isobutylene	0-2	%
NaHS	3-5	%
SECTION 5: Safety Related Data		
If the handling of this material / product requires the use of special protective e	equipment, please explain.	
Rubber boots, rubber gloves, goggles, respirator, chem suit	-	

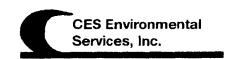
List all documents,	notes, data, and/o	r analysis attached	to this form as part	of the material /	product profile.
Analytical 3/7/08					

SECTION 7: Incompatibilities	
Please list all incompatibilities (if any):	
contact w/ strong acids will evolve H2S	

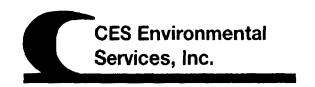
SECTION 8: Material Producer's Certification	4.	
The information contained herein is based on  generator knowledge as above and attached description is complete and accurate to the best of m deliberate or willful omissions of composition properties exist and that all disclosed. I certify that the materials tested are representative of all mate	y knoẃledge and I known or suspe	ability to determine that no cted hazards have been
Authorized Signature: NA - Product	Date :	5/27/08
Printed Name / Title : Bill Glusko / Env Mgr		
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process	s Facility Information :
Date: 6-4-08 Status: Approved Rejected		
Date: 6-4-08 Status: Approved Rejected		
Approval Number: 2804		



1.	Base Pricing (including freight):
	\$1.50/gul; trans \$69/he; FSC; \$250 tFelz wachent; \$3/94 for hed
2.	Contamination Limits (maximum limit before surcharges apply):
	material received must be a single phase that cannot have any top oil phase greater than 2 % of a second top oil phase
3.	Surcharge Pricing:
4	Special Testing Requirements:
)	
	pH, density, sulfides, mencapters & eb/gal Calc. Then with up an SIB teatment; second all info in the log book
5.	Treatment and Handling Protocol:
	specially treatment. Always have the driver pull into the boy
	on the south bay side, and have 2 samples pulled
6.	Treated Wastewater Discharge Subcategory:
	Subcategory A Subcategory B Subcategory C



7.	Tests for Product Recovered/Recycled (if applicable):
;	
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable);
8.	
8.	



# Waste Pre-Acceptance/Approval Letter

Date

6/4/2008

Dear

**Orval W Lewis** 

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

**CES Profile #** 

2806

Expiration Date 6/4/2010

Generator: Targa Midstream Services LP

Address:

10319 Hwy 146 North

Mont Belvieu, TX 77580

## Waste Information

Name of Waste: spent sodium hydroxide solution with ammonia (from LSNG u

TCEQ Waste Code #: Recycle

**Container Type:** 

## **Detailed Description of Process Generating Waste:**

used in the low sulfur gasoline mercaptan conversion process of removing disulfide oil at or mercaptans, the caustic is used to scrub H2S from the stream. The ammonia is from the caustic feedstock stream.

**Color:** light to dark

**Odor:** strong ammonia

**pH:** 12.12.48

**Physical State:** 

Incompatibilities: acids

## Safety Related Data/Special Handling:

std ppe for high pH material with sulfides.

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. 214 or

 $\Box$ 



4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676 http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948

U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

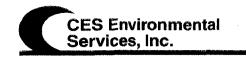
SECTION 1	: Generator	Information					
		ream Services					
Address:	10319 Hwy			<u> </u>			
City:	Mont Belvie		State:	TX	Zip:		77580
Contact:	Orval Lewis			Title:			
Phone Num		281-385-3215		Fax Number:	281-385-3188		
24/hr Phone							
US EPA ID		TXD980625974		_			
State ID No		RRGEN		SIC Code:	NA		
	-			_			
SECTION 2	: Billing Inf	ormation - 🗍 Sai	ne as Above				
		ream Services					
Address:	PO Box 10						
City:	Mont Belvie	li	State:	TX	Zip:		77580
Contact:	Orval Lewis			Title:	p.		
Phone Num	<del></del>	281-385-3215		w	281-385-3188		
r none nun		201 000 0210			201 000 0100	<del></del>	
SECTION 3	: General D	escription of the W	aste				
<u>OLO HONO</u>		occupation of the th	2212				
Name of Wa	aste:	Spent sodium hydro	xide solution wit	h Ammonia (Fro	m I SNG unit)		
		Process Generatin			in correr anky		
		soline mercaptan cor		of removing dis	ulfide oil and/or r	nercantane the	cauetic ie
		the stream. The ami				noroaptano, ino	causiic is
Physical St	ate: 🗵	Liquid	Sludge	П	Powder		
,		Solid	☐ Filter Ca	ke 🗆	Combination	/	1
						(	
Color:	light to dark			Odor:	strong ammonia	a	
				<b></b>	ottorig diminoria		
Specific Gr	avitv (water	=1):	1.16	3	Density: Q	( lbs/gal	
•	, ,	,		===	<del></del>	——————————————————————————————————————	The second secon
Does this m	naterial conf	ain any total pheno	lic compounds	? 🗹 Yes	□ No		
		•	•	<del></del>			
Does this n	naterial conf	tain any para substi	tuted phenolic	compounds?	্য Yes	□ No	
		• •	•	•			
Is the Wast	e subject to	the benzene waste	operation NES	HAP? (40 CFR )	Part 61. Subpar	t FF) 🗀 Ye	s 🗇 No
		ste contains benzene					
2812	2813		2819 282	_		•	833 2834
2835	2836	2841	2842 284	3 2844			865 2869
2873	2874	2876	2879 289				899 2911
3312	4953	4959	9511				2011
Layers:	☑ Sing	gie-phase	Multi-phase				
•		•	•				
Container T	ype:	Drum   Tote	☑ Truck [	Other (explai	n)		
	71	Tooline .			•••		
Frequency:	☑ Weekly	☐ Monthly ☐ Y	early 🞵 One-	Time			
Quantity:			-5-Mar				
		- SAMO					
Is this a US	EPA "Hazar	dous Waste" per 40	CFR 261.3?	☐ Yes	[7] No		
						ttached hereto	
, •	If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto						

If "Yes", the state of the stat	EPA "Hazardou nen please comp s it:	blete, sign and D001 (Ignitabletals:	le)	D002 (Corre D005 D0011	osive) [	ents Form attac	ched hereto	□ D009	
	" or "K" Listed			?	☐ Ye	s 🗸	No		
40 CFR 261	mmercial prod .33(e) or (f)? then please lis		□ Y		<b>"U" or "P" w</b> No	aste code un	der		
	e Waste Code I		Sodium Hvo	Recycle froxide Solu	tion				
Class:		UN/NA:	UN1824	PG:	11	RQ:	na		
Flas	h Point	р	Н	Reacti	ve Sulfides	Reactive	Cyanides	Sol	ids
>	150	12-1	2.48	0	mg/l	0	mg/i	<1	%
Oil 8	Grease	TO	OC .		Zinc	Cor	per	Nic	kel
0	mg/l	0	mg/l	0	mg/l	0	mg/l	0	mg/l
SECTION 4	Physical and	Chemical Data	a						
	COM	IPONENTS TA	BLE		CONCENTRATOIN			UNITS	
T	he waste consi			als	Ranges are acceptable			or %	
	Sodium Hy	droxide Sulfid	le Solution		98-100			%	
		Ammonia			0-1			%	
	Solids					<:	1		%

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Sodium Hydroxide Sulfide Solution	98-100	%
Ammonia	0-1	%
Solids	<1	%
sodium Hydroxide Solution W/Solenes	5-70,800	gon

SECTION 6. Attached		mant of the works
approval package.	<ul> <li>data and/or analysis attached to this form as p</li> <li>MSDS</li> </ul>	part of the waste
approval package.	MODO	
SECTION 7: Incompati		
Please list ALL incompat	ibilities (if any):	
acids		
SECTION 8: Generator	's Knowledge Documentation	
	e hazardous waste characteristics, listed below	WAS NOT PERFORMED
based upon the following		, , , , , , , , , , , , , , , , , , , ,
based apon the renewing	gonorato. Movioago.	
TCLP Metals:	M.	
TCLP Volatiles:	*	
TCLP Semi-Volatiles:	X	
Reactivity:	X	
Corrosivity:	X	
Ignitability:	X	
igritusiity.		
SECTION 9: Waste Rece	ipt Classification Under 40 CFR 437 (Prtaining t	o Pre-Treatment Requirements for Centralized Waste
Treatment Facilities)		
	al a wastewater or wastewater sludge?	☐ YES ☑ NO
If 'Yes', o	complete this section.	
DIEAGECH	ECK THE APPROPRIATE BOX. IF NO APPROPI	PIATE CATEGORY GO TO THE NEXT PAGE
F LLAUL OII	EOR THE ATTROTHATE BOX. II NO ATTROTT	MATE DATEGOTT, GO TO THE NEXT TAGE.
Metals Subcategory: Su	bpart A	
	pplating baths and/or sludges	
	g rinse water and sludges	
☐ Chromate wa		
	control blow down water and sludges	
☐ Spent anodiz		
☐ Incineration v ☐ Waste liquid		
	taining wastes greater than 136 mg/l	
	and bases with or without metals	
	sing, and surface preparation solutions from electro	oplating or phosphating operations
	ourring wastewater	
	acid solutions used to clean metal parts or equipme	ent
Oils Subcategory: Subp	art B	
Used oils	A face and a second face and	
	ulsions or mixtures	
☐ Lubricants ☐ Coolants		
******	d groundwater clean-up from petroleum sources	
Used petrole		
Oil spill clear	1-up	
☐ Bilge water	•	
☐ Rinse/wash v	waters from petroleum sources	

☐ Interceptor wastes ☐ Off-specification fuels ☐ Underground storage remediation waste ☐ Tank clean-out from petroleum or oily sources ☐ Non-contact used glycols ☐ Aqueous and oil mixtures from parts cleaning operations ☐ Wastewater from oil bearing paint washes
Organics Subcategory: Subpart C  Landfill leachate Contaminated groundwater clean-up from non-petroleum sources Solvent-bearing wastes Off-specification organic product Still bottoms Byproduct waste glycol Wastewater from paint washes Wastewater from adhesives and/or epoxies formulation Wastewater from organic chemical product operations Tank clean-out from organic, non-petroleum sources
(1)  If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.
If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.  Cadmium: 0.2 mg/L  Chromium: 8.9 mg/L  Copper: 4.9 mg/L  Nickel: 37.5 mg/L
(3)  If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.  Metals Subcategory  Oils Subcategory  Organics Subcategory
SECTION 10 Additional Instructions
If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.
SECTION 11: Generator's Certification  The information contained herein is based on   generator knowledge and/or  analytical data.  I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.
Authorized Signature: Date: 5-4-08
Printed Name/Title: Ricky Ray Mechnician
CES USE ONLY (DO NOT WRITE IN THIS SPACE)
Compliance Officer: Pelototal Approved Rejected  Approval Number: 2806



1. Base Pricing (including freight):
\$350/10ad freight Management-fee-4.50/gey
Management fee-4.50/gey
2. Contamination Limit (maximum limit before surchages apply):
Solicis - < 196
3. Surcharge Pricing:
and fue solids > 190 and sloggel
4. Special Testing Requirements:
Test for pH, dansity, Sulfides, Sodlum Hydropode 2.
5. Treatment and Handling Protocol:
Remained of the Annual by oin source the amountagersses
into a water souther my a pet of about 4.0. Final treated Countre
Removal of the Ammonia gas by air sparging. Capture the amnonia gasses into a water souther of a post of about 4.0. Final treated Caustic-Southide liquid is a good NaSH product. The amnoniated scrubber
water will need to process to system 1.
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



7. Tests for Product	Recovered/Recycled (if applicable):	
NA		
8. Management for	Product Recovered/Recycled (if applicable)	
NA		

## **Interim Report of Analysis** 2008-006911-DRPK

Intertek Caleb Brett 1114 Seaco Avenue Deer Park, TX 77536 Ph: (713) 844 - 3200 Fax: (713) 844 - 3330

Client: Targa Resources, Inc.

Date Requested: 05/21/2008

Contact: Mr. Orval Lewis

**Date Received:** 05/21/2008

Client Ref. No.:

Collected By: Client

Client	Sam	ple	Desc	ription
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#### **Product**

Sample ID

Spent Caustic Trailer From LSNG. 05/21/08

Water

2008-006911-DRPK-001

## Sample Results

Sample ID: 2008-006911-DRPK-001

Date Sampled: 05/21/2008

Sample Description: Spent Caustic Trailer From LSNG. 05/21/08

Date Received: 05/21/2008

Product: Water

Date Analyzed: 05/21/2008

Method	Test	Results	Units
ASTM D5623	H2S	19.2	ppm (Wt)
	cos	5.4	ppm (Wt)
	Carbon Disulfide	33.0	ppm (Wt)
	Methyl Mercaptan	<0.1	ppm (Wt)
	Ethyl Mercaptan	2.5	ppm (Wt)
	Isopropyl Mercaptan	<0.1	ppm (Wt)
	n-Propyl Mercaptan	<0.1	ppm (Wt)
	tert-Butyl Mercaptan	<0.1	ppm (Wt)
	sec-Butyl Mercaptan	<0.1	ppm (Wt)
	Isobutyl Mercaptan	<0.1	ppm (Wt)
	n-Butyl Mercaptan	<0.1	ppm (Wt)
	Ethyl Methyl Sulfide	<0.1	ppm (Wt)
	Thiophene	<0.1	ppm (Wt)
	Tetra-Hydro Thiophene	<0.1	ppm (Wt)
	2-Methyl Thiophene	<0.1	ppm (Wt)
	3-Methyl Thiophene	<0.1	ppm (Wt)
	Dimethyl Sulfide	<0.1	ppm (Wt)
	Diethyl Sulfide	<0.1	ppm (Wt)
	Dimethyl Disulfide	<0.1	ppm (Wt)
	Diethyl Disulfide	<0.1	ppm (Wt)
	Benzothiophene	<0.1	ppm (Wt)

# Interim Report of Analysis 2008-006911-DRPK

Sample ID: 2008-006911-DRPK-001

Date Sampled: 05/21/2008

Sample Description: Spent Caustic Trailer From LSNG. 05/21/08

Date Received: 05/21/2008

Product: Water

Date Analyzed: 05/21/2008

		Results	T.L.:4	
Method	Test	Results	Units	
HTM_G35	NOTE	As nitrogen		
	Ammonia in LPG	10739	ppm (Wt)	
	Unknown 1	601	ppm (Wt)	
	Unknown 2	242	ppm (Wt)	
	Unknown 3	103	ppm (Wt)	

This report has been reviewed for accuracy, completeness, and comparison against specifications when available. The reported results are only representative of the samples submitted for testing and are subject to confirmation upon completion of the final report. This report shall not be reproduced except in full without written approval of the laboratory.

Laboratory Review	Reported By
Date:	Date:

Intertek Caleb Brett

1114 Seaco Avenue, Deer Park, TX 77536 Ph: (713) 844 -3200, Fax: (713) 844 - 3330, Email: dptechctr@intertek.com, www.intertek-cb.com



# Material Safety Data Sheet Sodium hydrosulfide solution

	Number 8000TDC (Revised: 1/		6 Pages
Section	n 1: CHEMICAL PRO	DDUCT and COMPANY IDENTIFIC	CATION
1.1	Chemical Family	KI-300 depressant, NaHS	
1.2	Manufacturer	Tessenderlo Davison Che 1916 Farmerville Highway Ruston, Louisiana 71270 (318) 242-5305	
1.3	Emergency Contact	, , , , , , , , , , , , , , , , , , ,	
Section	n 2: COMPOSITION	, INFORMATION ON INGREDIEN	TS
2.1	Chemical Ingredients (% by wt Sodium hydrosulfide Water	t.) CAS #:16721-80-5 CAS #:7732-18-5	20-45% 55-80%
	(See Section 8 for exposure guid	delines)	
Section	n 3: HAZARDS IDEN	NTIFICATION	
NFPA:	Health - 3	Flammability - 2 Reactivit	ty - 1
		EMERGENCY OVERVIEW	
	Contains Eye contact will cause m	rning: Solution is highly alkaline s hydrogen sulfide, a highly toxic g narked eye irritation and possibly s n irritation and possible corrosion o	evere corneal damage.

Ingestion will irritate/burn mouth, throat and gastrointestinal tract. Contact with

stomach acid will cause hydrogen sulfide vapors to be released. Heating or acid will cause hydrogen sulfide gas to evolve.

#### Section 3: HAZARDS IDENTIFICATION, Cont.

#### 3.1 POTENTIAL HEALTH EFFECTS

EYE: Contact with the eyes will cause marked eye irritation and possibly severe corneal damage.

**SKIN CONTACT:** Contact with the skin will cause skin irritation or burning sensation. Prolonged contact will result in corrosion of the skin.

SKIN ABSORPTION: Absorption is unlikely to occur.

**INGESTION:** Ingestion will result in severe burning and corrosion of mouth, throat and the gastrointestinal tract. If the ingested material contacts stomach acid, highly toxic hydrogen sulfide gas will be evolved.

**INHALATION:** Product solution and vapors contain highly toxic hydrogen sulfide gas. Exposure to this gas causes, headaches, nausea, dizziness and vomiting. Continued exposure can lead to loss of consciousness and death..

CHRONIC EFFECTS/CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

#### Section 4: FIRST AID MEASURES

- **4.1 EYES:** Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye. Obtain immediate medical attention.
- **4.2 SKIN:** Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain immediate medical attention
- **4.3 INGESTION:** DO NOT INDUCE VOMITING. If victim is conscious, immediately give 2 to 4 glasses of water. If vomiting does occur, repeat fluid administration. Obtain immediate medical attention.
- **4.4 INHALATION:** Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain immediate medical attention.

## Section 5: FIRE FIGHTING MEASURES

#### **5.1 FLAMMABLE PROPERTIES**

**FLASH POINT: Not flammable** 

METHOD USED: NA

**5.2 FLAMMABLE LIMITS** 

Hydrogen sulfide

LFL: 4%

UFL: 44%

- 5.3 EXTINGUISHING MEDIA: Water spray or foam or as appropriate for combustibles involved in fire.
- **5.4 FIRE & EXPLOSIVE HAZARDS:** Solution is non-flammable. However if these solutions are exposed to heat or acids, hydrogen sulfide will be released and may form explosive mixtures with air (see above).

Keep containers/storage vessels in fire area cooled with water spray. Heating may cause the release of hydrogen sulfide vapors.

r		
Section	5:	FIRE FIGHTING MEASURES (Cont.)

**5.5 FIRE FIGHTING EQUIPMENT:** Because of the possible presence of toxic gases and the corrosive nature of the product, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### Section 6: ACCIDENTAL RELEASE MEASURES

- **6.1 Small releases:** Confine and absorb small releases on sand earth or other inert absorbent. Oxidize residual reactive sulfides with a weak (3-5%) hydrogen peroxide solution.
- **6.2 Large releases:** Wear proper protective equipment. Confine area to qualified personnel. Shut off release if safe to do so. Dike spill area to prevent runoff into sewers, drains (potential explosive mixtures of hydrogen sulfide in confined spaces) or surface waterways (potential aquatic toxicity). Recover as much of the solution as possible. Treat remaining material as a small release (above).

### Section 7: HANDLING and STORAGE

- **7.1 Handling:** Wear proper protective equipment (See Section 8). Avoid breathing product vapors. Avoid contact with skin and eyes. Use only in a well ventilated area. Dilute product only in enclosed containers. Wash thoroughly after handling.
- **7.2 Storage:** Store in well ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures [<80° F (27° C)]. (See Section 10.4 for materials of construction)

## Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

- **8.1 RESPIRATORY PROTECTION:** If working near open container or storage vessel opening or open tank truck dome cover, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent).
- **8.2 SKIN PROTECTION:** Neoprene rubber gloves, chemical suit and boots should be worn to prevent contact with the liquid. Wash contaminated clothing prior to reuse. Contaminated leather shoes cannot be cleaned and should be discarded.
- 8.3 EYE PROTECTION: Chemical goggles and a full face shield.
- **8.4 EXPOSURE GUIDELINES:**

OSHA

**ACGIH** 

Hydrogen sulfide

TWA STEL 20 ppm (ceiling)

TLV STEL 10 ppm (ceiling)

**8.5 ENGINEERING CONTROLS:** Use adequate exhaust ventilation to prevent inhalation of product vapors. Where feasible scrub process or storage vessel vapors with caustic solution. Maintain eyewash/safety shower in areas where chemical is handled.

#### Section 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 APPEARANCE:

Yellow to dark green liquid.

9.2 ODOR:

Strong hydrogen sulfide (rotten egg) odor.

9.3 BOILING POINT:

253 °F(122.8 °C) - 269 °F (131.7 °C)

9.4 VAPOR PRESSURE:

17 mm Hg @ 68 °F (20 °C)

9.5 **VAPOR DENSITY**: (Air = 1.0)

1.17

9.6 SOLUBILITY IN WATER:

Complete

9.7 SPECIFIC GRAVITY:

1.152 - 1.303 (9.6 - 10.9 lbs/gal)

9.8 FREEZING POINT:

0° F (-17.8° C) - 20%

9.9 pH:

56° F (13.3° C) - 45% 11.5 - 12.5

9.10 VOLATILE:

Not applicable

#### Section 10: STABILITY and REACTIVITY

10.1 STABILITY: This is a stable material

10.2 HAZARDOUS POLYMERIZATION: Will not occur.

**10.3 HAZARDOUS DECOMPOSITION PRODUCTS:** Heating this product will evolve hydrogen sulfide. Fire conditions will also cause the production of sulfur dioxide. Hydrogen sulfide (4-44%) may form flammable mixtures with air.

10.4 INCOMPATIBILITY: Acids will cause the release of highly toxic hydrogen sulfide. Sodium hydrosulfide solution is not compatible with copper, zinc, aluminum or their alloys (i.e. bronze, brass, galvanized metals, etc.). Corrosive to steel above 150° F (65.5° C). These materials of construction should not be used in handling systems or storage containers for this product. (SEE Section 7.2, Storage)

#### Section 11: TOXICOLOGICAL INFORMATION

11.1 ORAL: Data not available

11.2 DERMAL: Data not available

11.3 INHALATION:

INH-RAT LC₅₀: 444 ppm (hydrogen sulfide) INH-MOUSE LC₅₀: 1,500 mg/m³ 18 minutes

INH-RAT LC₅₀: 1,500 mg/m³ 14 minutes

11.4 CHRONIC/CARCINOGENICITY: No evidence available

11.5 TERATOLOGY: Data not available

11.6 REPRODUCTION: Data not available

11.7 MUTAGENICITY: Data not available

#### Section 12: ECOLOGICAL INFORMATION

Static acute 96 hour-LC₅₀ for mosquito fish is 206 mg/L. (TI_m - fresh water)

LC₅₀ fly inhalation 1,500 mg/m³, 7 minutes

TL_m Gammarus 0.84 mg/L, 96 hours (hydrogen sulfide)

TL_m Ephemera 0.316 mg/L, 96 hours (hydrogen sulfide)

TL_m Flathead minnow 0.071 – 0.55 mg/L @ 6-24°C, 96 hour flow through bioassay (hydrogen sulfide)

TL_m Bluegill 0.0090 – 0.0140 mg/L @ 20-22°C, 96 hour flow through bioassay (hydrogen sulfide)

TL_m Brook trout 0.0216 – 0.0308 mg/L @ 8-12.5°C, 96 hour flow through bioassay (hydrogen sulfide)

#### Section 13: DISPOSAL CONSIDERATIONS

If released to the environment for other than its intended purpose, this product contains some reactive sulfides which may be in sufficient quantity to meet the definition of a D003, hazardous waste.

#### Section 14: TRANSPORT INFORMATION

14.1 DOT Shipping Name: Corrosive liquids, toxic, n.o.s.

14.2 DOT Hazard Class:

14.3 UN/NA Number: UN2922

UN2949 (IMDG - over water)

14.4 Packing Group:

14.5 DOT Placard: Corrosive

14.6 DOT Label(s):

Corrosive

Toxic

H

14.7 IMO Shipping Name:

Sodium hydrosulphide solution

14.8 RQ (Reportable Quantity):

5,000 lbs (2268 Kg) 100% basis [2,604 gal (20%) 1,019 gal (45%)]

14.9 RR STCC Number:

28-123-33/49-352-04 (international)

#### Section 15: REGULATORY INFORMATION

15.1 OSHA: This product is listed as a hazardous material under criteria of the Federal

OSHA Hazard Communication Standard, 29 CFR 1910.1200.

15.2 SARA TITLE III: a.

EHS (Extremely Hazardous Substance) List:

No

Section 15:	REGU	LATORY INFORMATION (Cont.)		
	b.	Section 311/312, (Tier I,II) Categories:	Immediate (acute) Fire Sudden release Reactivity Delayed (chronic)	Yes Yes No Yes No
	c.	Section 313 (Toxic Release Report-For	m R):	No
	d.	TPQ (Threshold Planning Quantity):		No
15.3 CERCLA/SUPE	RFUND:	RQ (Reportable Quantity)		5,000 lbs (2270 Kg)
15.4 TSCA (Toxic St	ıbstance	Control Act) Inventory List:		Yes
15.5 RCRA (Resource	ce Conse	rvation and Recovery Act) Status:		D003 (See Section 13)
15.6 WHMIS (Canad	a) Hazar	d Classification:		E, D1
15.7 DOT Hazardous	s Materia	I: (See Section 14)		Yes
15.8 CAA Hazardous	s Air Pollu	utant (HAP)		No

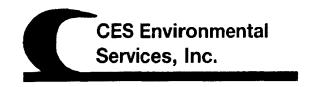
#### Section 16: OTHER INFORMATION

REVISIONS: The entire MSDS was reformatted to comply to ANSI Standard Z400.1-

1993.

Revised Sections 1.1, 8.3, 11, 12, 5/7/02 Revised pH range in Section 8, 6/19/02 Revised shipping info & RQ data, 1/15/03

THE INFORMATION PUBLISHED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN COMPILED FROM OUR EXPERIENCE AND OSHA, ANSI, NFPA, DOT, ERG, AND CHRIS. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THIS INFORMATION FOR THE ADOPTION OF NECESSARY SAFETY PRECAUTIONS. WE RESERVE THE RIGHT TO REVISE MATERIAL SAFETY DATA SHEETS PERIODICALLY AS NEW INFORMATION BECOMES AVAILABLE.



## **Material / Product Approval Letter**

Date 6/13/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2825

Expiration Date 6/12/2010

**Producer:** Afton Chemical Corporation @ Delta Chemical

Address: 334 Tidal Road

Deer Park, TX 77536

Material / Product Information

Name of Material / Product Afton Fuel Additive - eval ash

Container Type:

Detailed Description of Process Generating or Producing the Material / Product:

Unused product

Color: light amber Odor: amine like

**pH**: 2-12

**Physical State:** 

Incompatibilities: strong oxidizing and reducing agents

Safety Related Data/Special Handling:

use chemical resistant gloves, suit, boots, safety goggles

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. Reviewed. Paparworkis

OK. There is not a genorators

4904 Griggs Road

Signature. Phone: (713) 676-1

CES Environmental Services, Inc.

Phone: (713) 676-1460

Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948

U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Mate	rial Producer Infor	mation				
Company:		Corporation @ Delta of	Chemical			
Address:	334 Tidal Road					
City, State, Zip:	Deer Park, TX 77	536				
Contact:	Tim Menard		Title:			
Phone No:	281-680-4113		Fax No:	281-479-	9842	
24/hr Phone:	713-819-3172					
U.S. EPA I.D. No:		****				
State I.D.			SIC Cod	le:		
			<del></del>			
<b>SECTION 2: Billin</b>						
Company:	Afton Chemical Con	rporation				
Address:	501 Monsanto Ave					
City, State, Zip:	Suget, Illinois 6220	1				
Contact:	Ed Cox	Tit	le:			
Phone No:	1.618-583-1078	Fa	x No: 618-583	-1388		
<del>.</del>						
SECTION 3: Gene	ral Description of th	ne Material / Produc	t			
			_			
Name of Material /			3.6 4 1 1 / 35 4		1	
<b>Detailed Description</b>	n of Process Genera	ting or Producing th	ie Material / Prod	uct: Unused pro	oduct	
Physical State	⊠ Liquid	Sludge	☐ Powde			
Physical State:	☐ Liquid	Sludge	Powde			
Physical State:	<ul><li>☑ Liquid</li><li>☐ Solid</li></ul>	☐ Sludge ☐ Filter Cake	☐ Powde ☐ Combi			
·	☐ Solid	Filter Cake				
Physical State:  Color: <u>Light Amber</u>	☐ Solid	= -				
Color: <u>Light Amber</u>	☐ Solid	Filter Cake Odor: Amine-like	☐ Combi			
·	☐ Solid	Filter Cake	☐ Combi			
Color: <u>Light Amber</u> Specific Gravity (wa	□ Solid  ater=1): <u>.9</u>	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/	☐ Combi			
Color: <u>Light Amber</u>	□ Solid  ater=1): <u>.9</u>	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/	☐ Combi			
Color: <u>Light Amber</u> Specific Gravity (wa	Solid  ater=1): <u>.9</u> ontain any total pho	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/	☐ Combi	ation		
Color: <u>Light Amber</u> Specific Gravity (was  Does this material colors t	Solid  ater=1): .9  ontain any total pho ontain any para sub	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co	☐ Combi	ation		
Color: <u>Light Amber</u> Specific Gravity (was Does this material c	Solid  ater=1): <u>.9</u> ontain any total pho	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co	☐ Combi	ation		
Color: <u>Light Amber</u> Specific Gravity (wa  Does this material c  Does this material c  Layers:	☐ Solid  ater=1): .9  ontain any total pho ontain any para sub ☑ Single-phase	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co	☐ Combi gal ☐ Yes ☑ No mpounds? ☐ Ye ohase	nation	Oth our (ourslain)	
Color: <u>Light Amber</u> Specific Gravity (was  Does this material colors this material colors this material colors this material colors.  Layers:  Container Type:	□ Solid  ater=1): .9  ontain any total pho ontain any para sub □ Single-phase □ Drum	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co	☐ Combi	nation	Other (explain)	
Color: <u>Light Amber</u> Specific Gravity (wa  Does this material c  Does this material c  Layers:	☐ Solid  ater=1): .9  ontain any total pho ontain any para sub ☑ Single-phase	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co	☐ Combi gal ☐ Yes ☑ No mpounds? ☐ Ye ohase	nation	Other (explain)	
Color: <u>Light Amber</u> Specific Gravity (was  Does this material colors this material colors this material colors this material colors.  Layers:  Container Type:	□ Solid  ater=1): .9  ontain any total pho ontain any para sub □ Single-phase □ Drum	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co	☐ Combi gal ☐ Yes ☑ No mpounds? ☐ Ye ohase	nation	Other (explain)	
Color: <u>Light Amber</u> Specific Gravity (was Does this material colors this material colors:  Layers:  Container Type:  Container Size:	□ Solid  ater=1): .9  ontain any total pho ontain any para sub □ Single-phase □ Drum 55 gal	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co  Multi-p	☐ Combi  ☐ Combi  ☐ Yes ☑ No  ☐ Ye  ☐ Ye  ☐ Truck  ☐ —	nation  No		
Color: Light Amber Specific Gravity (wa Does this material colors Layers: Container Type: Container Size: Frequency:	□ Solid  ater=1): 9 ontain any total pho ontain any para sub □ Single-phase □ Drum 55 gal □ Weekly	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co  Multi-p  Tote  Monthly	☐ Combi  Gal  Yes ☑ No  mpounds? ☐ Ye  Dhase  ☐ Truck  ☐ Quart	nation  No	Other (explain) ——— Yearly	
Color: <u>Light Amber</u> Specific Gravity (was Does this material colors this material colors:  Layers:  Container Type:  Container Size:	□ Solid  ater=1): 9 ontain any total pho ontain any para sub □ Single-phase □ Drum 55 gal □ Weekly	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co  Multi-p  Tote  Monthly Other:	☐ Combi  ☐ Combi  ☐ Yes ☑ No  ☐ Ye  ☐ Ye  ☐ Truck  ☐ —	nation  No		
Color: Light Amber Specific Gravity (wa Does this material colors Layers: Container Type: Container Size: Frequency:	□ Solid  ater=1): 9 ontain any total pho ontain any para sub □ Single-phase □ Drum 55 gal □ Weekly	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co  Multi-p  Tote  Monthly Other:	☐ Combi  Gal  Yes ☑ No  mpounds? ☐ Ye  Dhase  ☐ Truck  ☐ Quart	nation  No		
Color: Light Amber Specific Gravity (wa Does this material colors Layers: Container Type: Container Size: Frequency:	Solid  ater=1): 9  ontain any total pho ontain any para sub Single-phase Drum 55 gal Weekly ontainers):	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co  Multi-p  Tote  Monthly Other:	☐ Combi  Gal  Yes ☑ No  mpounds? ☐ Ye  Dhase  ☐ Truck  ☐ Quart	nation  No	Yearly	
Color: Light Amber Specific Gravity (wa Does this material colors Layers: Container Type: Container Size: Frequency: Number of Units (co	Solid  ater=1): 9  ontain any total pho ontain any para sub Single-phase Drum 55 gal Weekly ontainers):	Filter Cake  Odor: Amine-like  Density: 7.5 lbs/ enolic compounds?  ostituted phenolic co  Multi-p  Tote  Monthly Other: Pandut  Combustible	☐ Combi    Gal   Yes	nation  No	Yearly	

Flash Point	рH	N/A	N/A	Solids
· >140	2-12			<u>0</u> %
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>100</u> mg/l	<u>0</u> mg/l	<u>0</u> mg/l	<u>O</u> mg/l	<u>O</u> mg/l

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Hitec Fuel additive	100%	%
		%
		%
		%
		%

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. use chemical resistant gloves, suit and boots, as well as safety goggles

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.  $\underline{MSDS}$ 

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any): Strong oxidizing and reducing agents

SECTION	8: Mate	riai Produc	er's Cer	tilication

attached description is complete and a	accurate to the best of my knowledgest and that all known or suspected	ad/or  analytical data. I hereby certify that the above and edge and ability to determine that no deliberate or willfued hazards have been disclosed. I certify that the materials
Authorized Signature:	n/a	Date: <u>6-1</u> 2-08
Printed Name/Title: no s	signature required	
CES USE ONLY (DO NOT WRITE IN THIS S	•	
Technical Manager:	Cha	
Date: $6-12-08$	Approved Rejected	
Approval Number: 2825		



1.	Base Pricing (including freight):
	Pay \$.15/gal. no trans charges
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
4.	Special Testing Requirements:
5.	Treatment and Handling Protocol:
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



#### 7. Tests for Product Recovered/Recycled (if applicable):

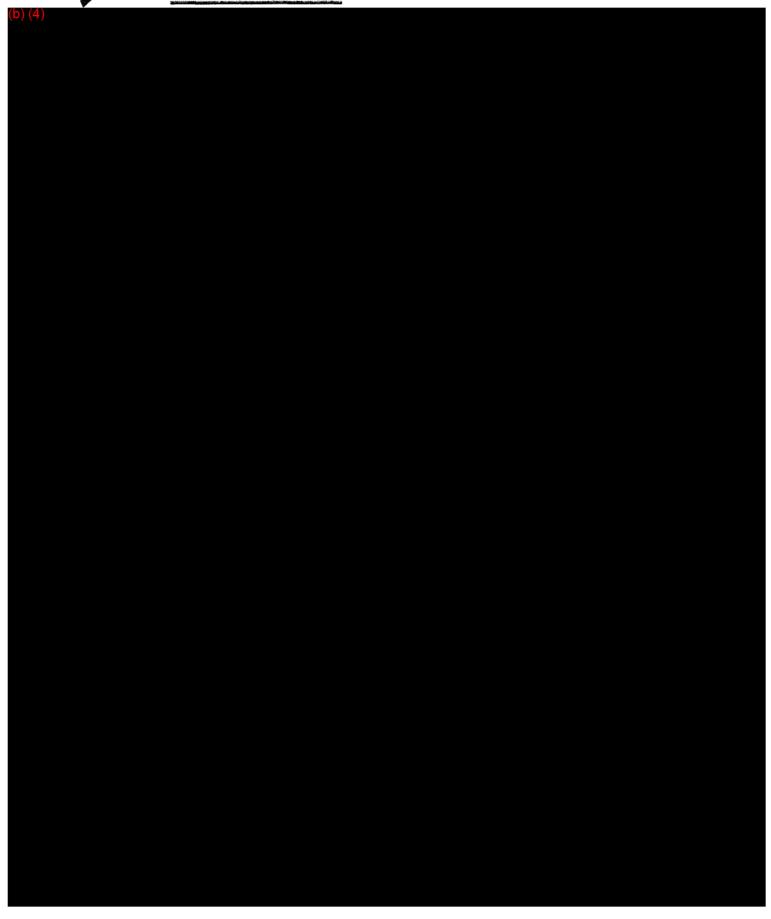
evaluate each product type shipped in this profile group for ash and record results (to eliminate such extensive testing for future loads). Catch a sample. Decord the sample in formation in the product book (product type abso-name on MSOS) and run the ash. Report this to Gary Peterson.

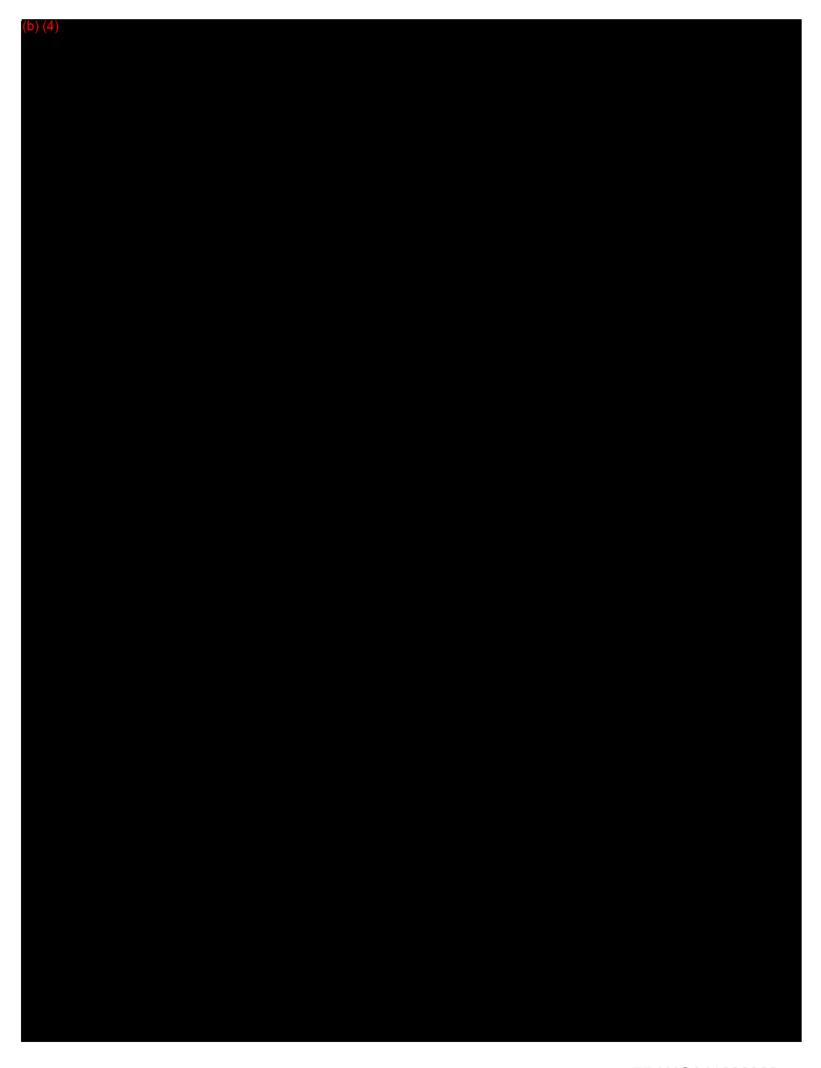
#### 8. Management for Product Recovered/Recycled (if applicable);

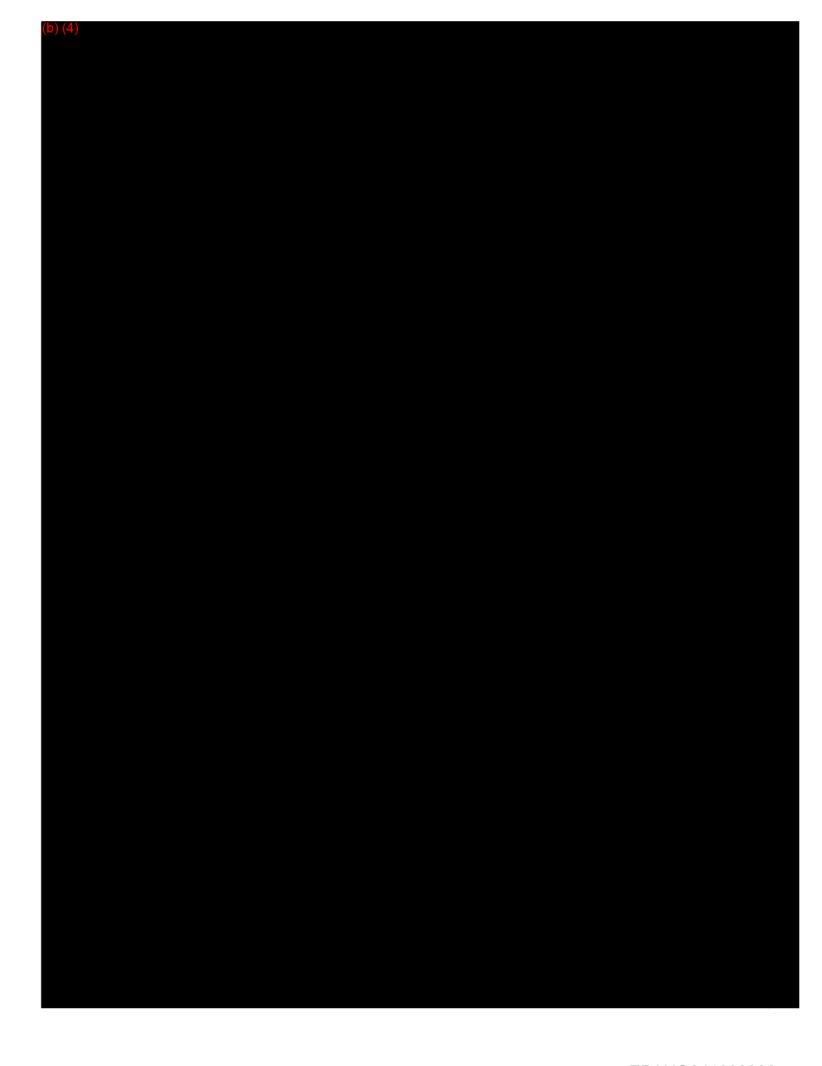
Meet with Joy with ash results to determine whether to blend product or ship with CES Fuels to Energis. Catch a sample from the drums for each Product type. Label , bring to the lob for ach testing.

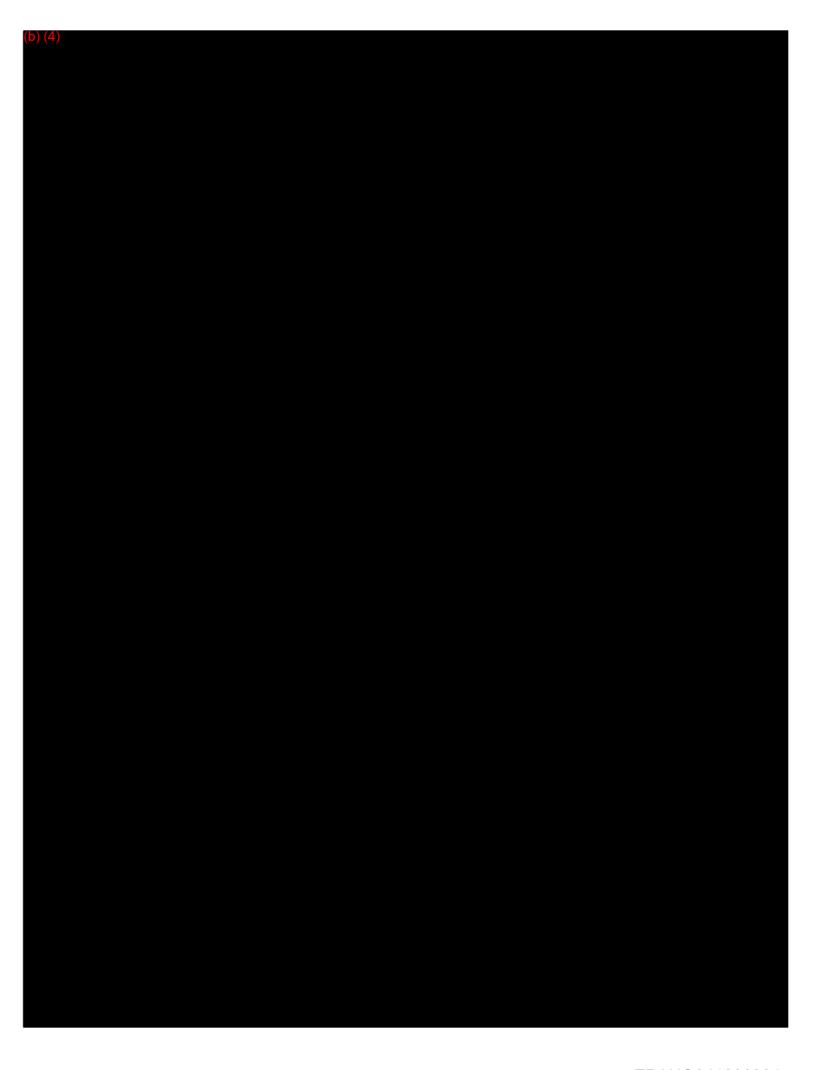


# **Material Safety Data Sheet**













*** END OF MSDS ***



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

To: Joy Baker

Date: 04/01/08

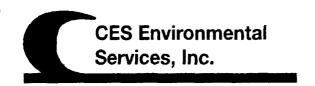
Cc: Gary Lenertz, Gary Peterson, Bo Cumberland

From: Miles Root Lab Memo: 08-052

Subject: Afton Chemical Evaluations 0308-121 – 125

Samples of viscosity improvers from Afton Chemical have been tested for compatibility with our black oil and light ends. Ash analyses have also been determined on two of the samples by an outside lab. All of the materials were compatible with the requested testing with either light ends or black oil. The HiTEC 9227 has a very high ash at 13.1 wt%. This entire spectrum of material is available in a lot of approximately 1000 drums that are partially filled with the various evaluation materials. All of the samples look clean and since they are in drums are able to be blended as needed to reduce the high ash content in the one stream. A summary of the test results is below.

,	Afton Chemicals Eva	ls 0308-121 thru 12	5
Eval#	Sample ID	Compatibility	Ash, wt%
0308-121	HiTEC 9227	Black Oil	13.1
0308-122	HiTEC 343	Black Oil	1.7
0308-123	HiTEC 5777	Light Ends	
0308-124	HiTEC 6560	Black Oil	!
0308-125	HITEC 5710A	Light Ends	



# **Material / Product Approval Letter**

Date 6/13/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2826

Expiration Date 6/12/2010

Producer: Afton Chemical Corporation @ Delta Chemical

Address: 334 Tidal Road

Deer Park, TX 77536

Material / Product Information

Name of Material / Product Afton fuel additive - high ash

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

unused product

Color: light amber Odor: amine like

**pH:** 2-12

**Physical State:** 

Incompatibilities: strong oxidizing and reducing agents

Safety Related Data/Special Handling:

use chemical resistant gloves, suit and boots, safety goggles

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

DRP
Reviewed. Paperwork is OK.
There is note generators
Sygnature.
490

CES Environmental Services, Inc.

Low Hiscus jky.

Ash= 13.7%

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

(713) 676-1460 Fax: (713) 676-1 http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Mate					
Company:		Corporation @ Delta Chemic	al		
Address:	334 Tidal Road				
City, State, Zip:	Deer Park, TX 77	536			
Contact:	Tim Menard		Title:		
Phone No:	281-680-4113		Fax No:	281-479-	9842
24/hr Phone:	713-819-3172		·····		
U.S. EPA I.D. No:			<del></del>		
State I.D.			SIC Code:		
SECTION 2: Billin	g Information –	Same as Above			
Company:	Afton Chemical Cor				
Address:	501 Monsanto Ave				
City, State, Zip:	Suget, Illinois 6220	1			
Contact:	Ed Cox	Title:		<del>-</del>	
Phone No:	1.618-583-1078	Fax No:	618-583-1388	3	
-					
SECTION 3: Gene	ral Description of th	ne Material / Product			
Name of Material / Detailed Descriptio		l additive - high ash ting or Producing the Mat	erial / Product:	Unused pro	<u>oduct</u>
Physical State:	Liquid     Solid     Solid	☐ Sludge ☐ Filter Cake	☐ Powder ☐ Combinatio	n	
Color: <u>Light Amber</u>		Odor: Amine-like			
Specific Gravity (w	ater=1): <u>1</u>	Density: 8.34 lbs/gal			
Does this material c	contain any total pho	enolic compounds? 🗌 Yes	s 🛛 No		
Does this material c	ontain any para sul	ostituted phenolic compoui	nds? 🗌 Yes 🏻 🖟	⊠ No	
Layers:	⊠ Single-phase	Multi-phase			
Container Type:	□ Drum	☐ Tote [	Truck		Other (explain)
Container Size:	<u>55 gal</u>		<del></del>		
Frequency:	☐ Weekly	☐ Monthly	Quarterly		Yearly
Number of Units (c	ontainers):	Other:			
	,	$\sim$	_		
		Product			
Proper U.S. DOT S	hipping Name:	Non RCRA/Non DC	OT Regulated Ma	iterial	
Class: NA	UN/I	NA: NA	PG: NA		RQ: NA

Flash Point	pН	N/A	N/A	Solids
<u>≥200</u>	<u>2-12</u>			<u>0</u> %
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>100</u> mg/l	<u>0</u> mg/l	<u>0</u> mg/l	Omg/l	<u>O</u> mg/l

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE	Concentration	Units	
The material / product consists of the following materials	Ranges are acceptable	or %	
Hitec Fuel additive	100%	%	
		%	
		%	
		%	
		%	

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. use chemical resistant gloves, suit and boots, as well as safety goggles

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. MSDS

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any): Strong oxidizing and reducing agents

#### **SECTION 8: Material Producer's Certification**

The information contained herein is based on $\boxtimes$ generator knowledge and/or $\square$ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.						
Authorized Signature:	a	Date: 6-12 -08				
Printed Name/Title: no signature req	uired					
CES USE ONLY (DO NOT WRITE IN THIS SPACE)						
Technical Manager: Pelul Chang	COL.					
Date: 6-12-08 Approved	Rejected					
Approval Number: 2826						



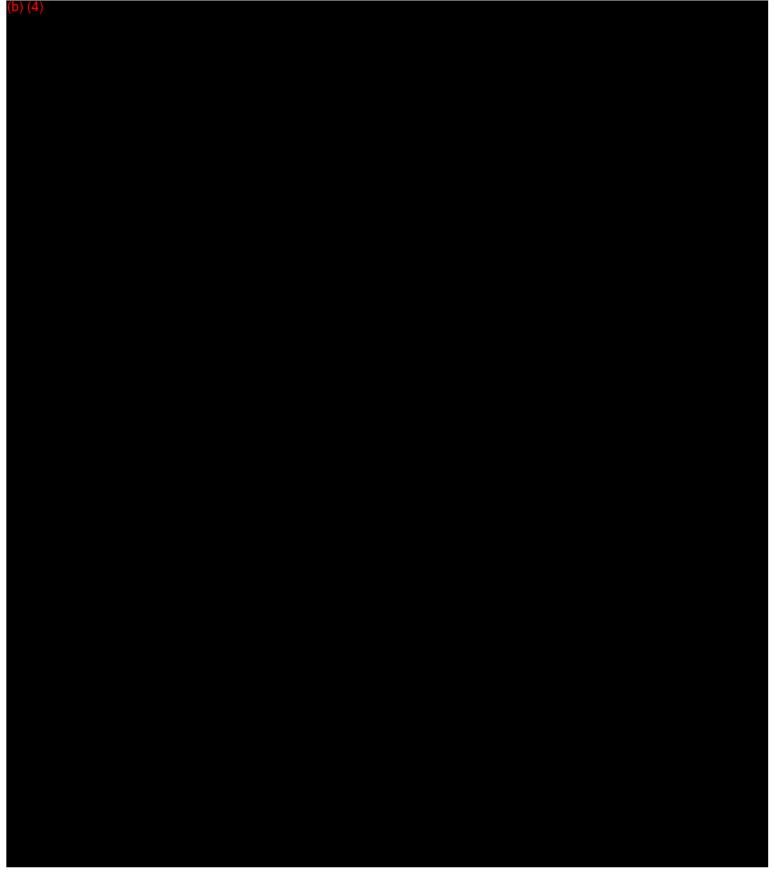
1.	Base Pricing (including freight):
	Pay \$.15/gal. no trans charges
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
1.	Special Testing Deguinements
•	Special Testing Requirements:
5.	Treatment and Handling Protocol:
5.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



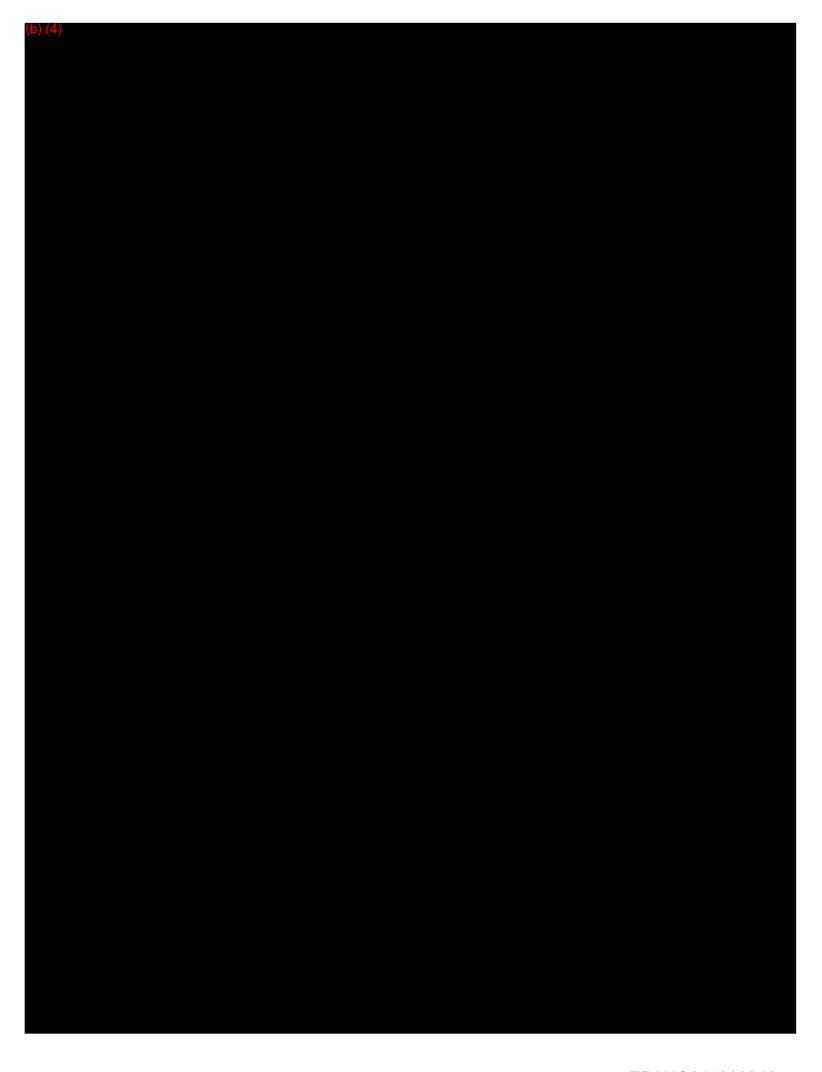
7.	Tests for Product Recovered/Recycled (if applicable):
	Retain Representative sample
8.	Management for Product Recovered/Recycled (if applicable);
	Segregate drums, bulk drums and send to Energis as CES NH Fuels . At low volumes (about 8 drums
	par boad) this material can process with black oil.

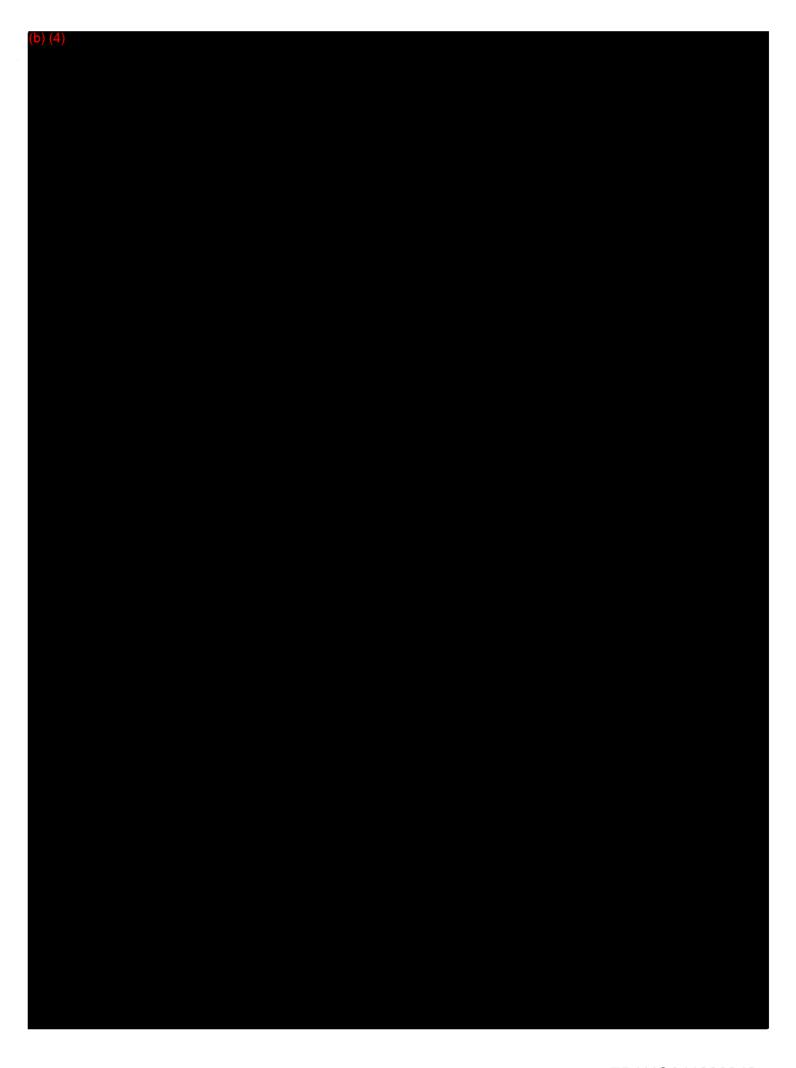


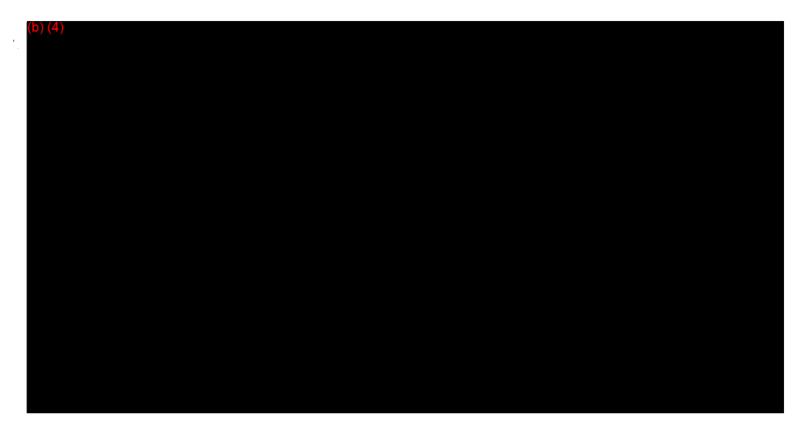
# Material Safety Data Sheet











*** END OF MSDS ***



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

To: Joy Baker

Date: 04/01/08

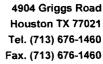
Cc: Gary Lenertz, Gary Peterson, Bo Cumberland

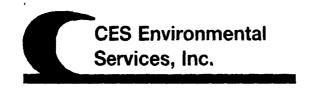
From: Miles Root Lab Memo: 08-052

Subject: Afton Chemical Evaluations 0308-121 – 125

Samples of viscosity improvers from Afton Chemical have been tested for compatibility with our black oil and light ends. Ash analyses have also been determined on two of the samples by an outside lab. All of the materials were compatible with the requested testing with either light ends or black oil. The HiTEC 9227 has a very high ash at 13.1 wt%. This entire spectrum of material is available in a lot of approximately 1000 drums that are partially filled with the various evaluation materials. All of the samples look clean and since they are in drums are able to be blended as needed to reduce the high ash content in the one stream. A summary of the test results is below.

Afton Chemicals Evals 0308-121 thru 125				
Eval#	Sample ID	Compatibility	Ash, wt%	
0308-121	HiTEC 9227	Black Oil	13.1	
0308-122	HiTEC 343	Black Oil	1.7	
0308-123	HiTEC 5777	Light Ends	1	
0308-124	HiTEC 6560	Black Oil	1	
0308-125	HiTEC 5710A	Light Ends		





## **Material / Product Approval Letter**

Date 6/13/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2829

Expiration Date 6/12/2010

**Producer:** Afton Chemical Corporation @ Delta Chemical

Address: 334 Tidal Road

Deer Park, TX 77536

Material / Product Information

Name of Material / Product Afton VI Improver - Polymer Based

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

Unused product

Color: light amber

Odor: amine like

**pH:** 2-12

**Physical State:** 

**Incompatibilities:** strong oxidizing reducing agents

Safety Related Data/Special Handling:

use chemical resistant gloves, suit and boots, safety goggles

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. Reviewed Paperwork OK - No Benerator Signature

# CES Environmental Services, Inc.

Low starsity

43

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Mate	rial Producer Inform	<u>ation</u>				
Company:	Afton Chemical Co	rporation @ De	lta Chemica	1		
Address:	334 Tidal Road					
City, State, Zip:	Deer Park, TX 7753	36				
Contact:	Tim Menard			Title:		
Phone No:	281-680-4113			Fax No:	281-479-	9842
24/hr Phone:	713-819-3172			<del>-</del>		
U.S. EPA I.D. No:		<del></del>		_		
State I.D.			*	SIC Code:		
				-		
SECTION 2: Billin	g Information – S	ame as Ahove				
Company:	Afton Chemical Corp					
Address:	501 Monsanto Ave					
City, State, Zip:	Suget, Illinois 62201					
Contact:	Ed Cox		Title:			
Phone No:	1.618-583-1078			618-583-1388	)	
rnone No:	1.010-303-10/0		Fax No:	010-303-1300	<u> </u>	
SECTION 3: Gene	ral Description of the	Material / Pro	duct			
	Product: Afton VI Im n of Process Generati			rial / Product:	Unused pro	<u>duct</u>
Physical State:	⊠ Liquid □ Solid	☐ Sludge ☐ Filter Ca	[ ke [	Powder Combinatio	n	
Color: Light Amber	O	dor: <u>Amine-lik</u>	<u>e</u>			
Specific Gravity (w	Specific Gravity (water=1): 0.9 Density: 7.5 lbs/gal					
Does this material contain any total phenolic compounds?   Yes   No						
Does this material o	Does this material contain any para substituted phenolic compounds?   Yes No					
Layers:	Single-phase	☐ Mu	lti-phase			
	□ Drum	☐ Tote		Truck	П	Other (explain)
Container Type: Container Size:	<u>55 gal</u>					
· -	55 gal  Weekly ontainers):		y 🔀 her:			Yearly
Container Size: Frequency:	55 gal  Weekly ontainers):	ot eodut	her:			

Flash Point	рH	N/A	N/A	Solids
>200	2-12			0%
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>100</u> mg/l	<u>0</u> mg/l	<u>0</u> mg/l	<u>O</u> mg/l	<u>0</u> mg/l

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE  The material / product consists of the following materials	Concentration Ranges are acceptable	Units or %
Hitec Viscosity Improver - Polymer based	100%	%
		%
		%
		%
		%

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. use chemical resistant gloves, suit and boots, as well as safety goggles

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. **MSDS** 

#### **SECTION 7: Incompatibilities**

Approval Number:

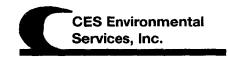
Please list all incompatibilities (if any):

Strong oxidizing and reducing agents

#### SECTION 8: Material Producer's Certification

2829

tached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful missions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials ested are representative of all materials described by this document.						
Authorized Signature:	n/a	Date: 6-12-08				
Printed Name/Title:	rinted Name/Title:no signature required					
CES USE ONLY (DO NOT WRITE IN 1						
Гесhnical Manager: Ledlu	Manga					
Date: 6-12-08	Approved Rejected					



1.	Base Fricing (including freight):
	Pay \$.15/gal. no trans charges
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
4.	Special Testing Requirements:
5.	Treatment and Handling Protocol:
6.	Treated Wastewater Discharge Subcategory:
!	Subcategory A Subcategory B Subcategory C



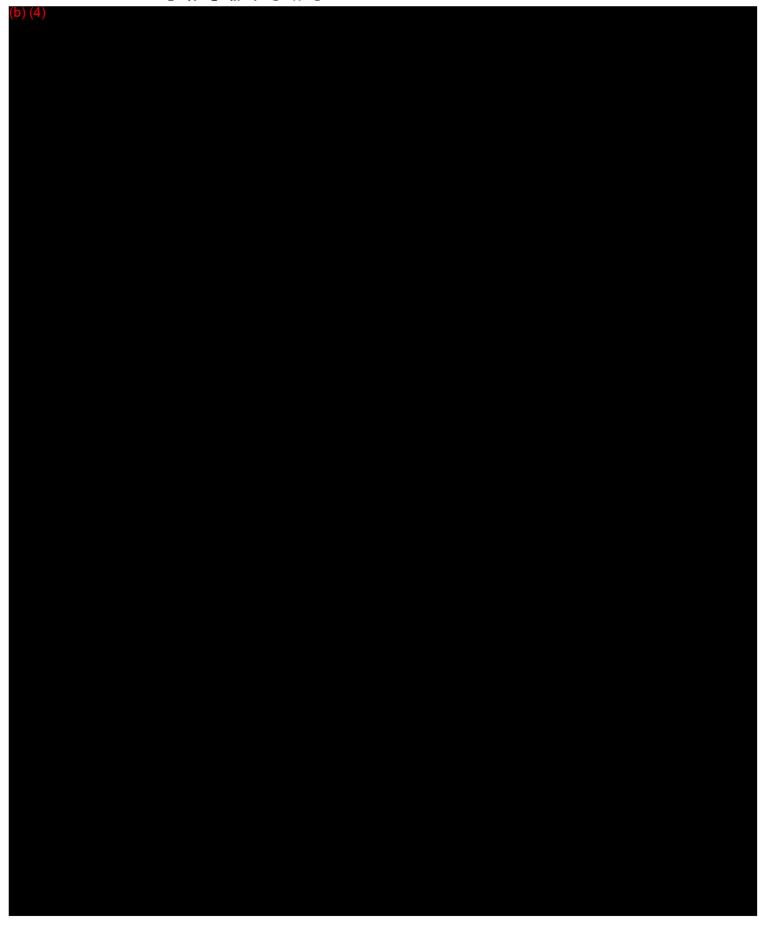
7.	Tests for Product Recovered/Recycled (if applicable):
	Check for blending compatibility with other line of viscosity improver from Afton. They recommended that we not blend the 2 lines of viscosity modifiers.
0	Management for Dreduct Descripted (Descripted (if applies blo))

#### 8. Management for Product Recovered/Recycled (if applicable);

Product cannot be sold as viscosity modifier per generator. Must blend with LIGHT ENDS. Do not blend with clay-based viscosity improver from Afton if blending test gives negative results. The drums should be deheaded and bulked in ISO container or tank. Scrape drums after bulking to remove product completely before shredding drums.

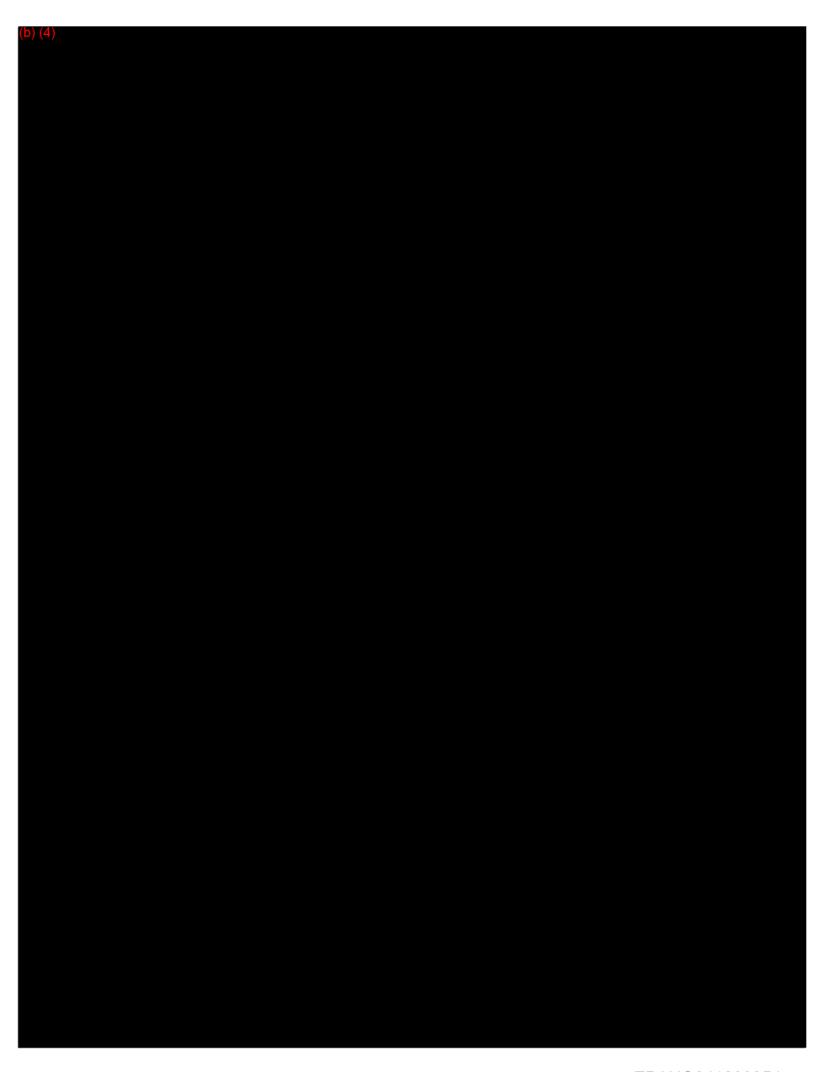


# Material Safety Data Sheet

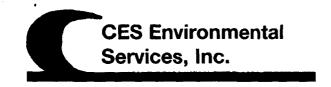








*** END OF MSDS ***



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

To: Joy Baker

Date: 04/01/08

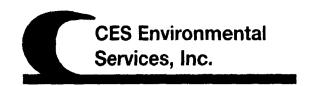
Cc: Gary Lenertz, Gary Peterson, Bo Cumberland

From: Miles Root Lab Memo: 08-052

Subject: Afton Chemical Evaluations 0308-121 – 125

Samples of viscosity improvers from Afton Chemical have been tested for compatibility with our black oil and light ends. Ash analyses have also been determined on two of the samples by an outside lab. All of the materials were compatible with the requested testing with either light ends or black oil. The HiTEC 9227 has a very high ash at 13.1 wt%. This entire spectrum of material is available in a lot of approximately 1000 drums that are partially filled with the various evaluation materials. All of the samples look clean and since they are in drums are able to be blended as needed to reduce the high ash content in the one stream. A summary of the test results is below.

Afton Chemicals Evals 0308-121 thru 125								
Eval#	Sample ID	Compatibility	Ash, wt%					
0308-121	HiTEC 9227	Black Oil	13.1					
0308-122	HiTEC 343	Black Oil	1.7					
0308-123	HiTEC 5777	Light Ends						
0308-124	HiTEC 6560	Black Oil						
0308-125	HITEC 5710A	Light Ends	1					



## Waste Pre-Acceptance/Approval Letter

Date 6/17/2008

Dear Kelly Aimes

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2837

Expiration Date 6/17/2010

**Generator:** Seatex Ltd **Address:** 445 Tx-36

Rosenberg, TX 77471

Waste Information

Name of Waste: e-core@CARBO-LIQ Plus-10

TCEQ Waste Code #: CESQ2191

**Container Type:** 

**Detailed Description of Process Generating Waste:** 

Off-spec

Color: hazy liquid

**Odor:** slight **pH:** 6.5-7.5

**Physical State:** 

Incompatibilities: na

Safety Related Data/Special Handling:

na

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. Name of Waste: (See MSDS) Name



4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit Number: 30948

			U.S. 1	EPA ID Nu	mber: TXD	008950461	ISWR Nu	mbe	r: 30900						
SECTION 1:	Ganara	tor inf	ormati	00											
Company:	SEATEX		STRINGT:	ET7											
Address:	445 TX-														
City:	ROSENE	BERG				State:	TX	-	Zip;				77471		
Contact:	KELLY A					-	Title:								
Phone Num	ber:		713-357	7-5340	***	· · · · · · · · · · · · · · · · · · ·		er:	713-357-	5301					
24/hr Phon	e Numbo	er: 7	13-35	7-5300				-					· ·		
US EPA ID N		_	XCESQ			<u> </u>	_								
State 10 No:	:	7	ESQG				SIC Code:			~,,,,,					
		_													
SECTION 2:	Billing to	nform	ation -		Same as	<u>Above</u>									
Company:	CKG SE	RVICES								-					
Address:	10707 H	IONEA	EGYPT	ROAD											
City:	MONTO	OMER	Y			_State:	TX		_Zip:				77316		
Contact:	ZAC MC	KAUG	HAN				Title:		PRESIDEN						
Phone Num	ber:	_2	81-541	4829			Fax Numb	er:	936-756-	1226	·-··-				
eremon A.	C	D		-4 44 144											
SECTION 3;	Genera	Descr	ption	ov tne vv	<u> BST&amp;</u>										
Name of Wa	actos	7	RADE	SPORT	-15-	a M50	s) e-	<u>ر</u> م	100 C	ach	-1	: A F	Plus	10	
Detailed De							OFF SPEC		" 40			77.		<i>L</i> –	
Detailed De	sci iption	OI FIL	, , ,	ei iei otii	.ę waste.		OII JIEC								
											·				
~								<del></del> -							
Physical Sta	te:	Ū L	lquid			Sludge			Powder						
•	ĺ	□ s	olld		$\bar{\Box}$	Filter Cal	ke .	$\bar{\Box}$	Combina	tion					
Calor:	HAZY LI	QUID				_	Odor:		SLIGHT						
Specific Gra	vity (wai	ter=1):	:	Ñ	D'				Density:	ND		lbs/ga	al		
							_			<b>4</b>					
Does this m	aterial co	ontain	any to	tal phen	olic comp	ounds?	لسا	Yes		∐ No					
						!!^ ^^	amada3			Vaa		Ma			
Does this ma	ateriai co	ontain	any pa	ira subst	itutea pri	enolic con	ubonuası			Yes	V	No			
le the Moste	. enhinet	to the	hanza	na wast	a onarati	NESHAI	P? (40 CFR Pi	art 6	il Suhnar	+ FF)		П	Yes	থ	No
							ode from you				follow		103	لٽا	140
2812	-	<b>wa</b> sic 2 <b>813</b>		2816	2819	_		2822			2824		2833		2834
2835		2836		2841	2842			2844			2861		2865		2869
		2874		2876	2879			2892			2896		2899		2911
2873							J	.032	2 20:	,,	2030		2033		2311
3312	•	1953		4959	9511										
Layers:	J	Single	phase	i	□ Mult	i-phase									
Container T	уре:		)rum	Ø T	ote [	] Truck	Other (ex	plal	n)						
Frequency: Quantity:		-		nthly [	Yearly	☐ One	-Time								

EPAHO041000358

	SEPA "Hazardo then please fi	•	-	3?	☐ <b>Y</b>	es G	No No		
If "Ves", Characteri	is it: stic for Toxic M	0001 (Ignita <b>Aetais</b> :	ble) []   D004   D010		05 🗆 00	□ D003 (Re 06 □ D00		□ 000	9
Characteri	stic for Toxic C	rganics: D01							
	F" or "K" Liste then please lis			?	☐ <b>Y</b>	es G	] No		<u> </u>
40 CFR 261 If "Yes",	33(e) or (f)? then please ils	t ALL applica	Y	es (	y a "U" or "P" \ ☑ No	waste code u	inder		_
Texas State	e Waste Code	Number:		CESQ219	1		-		
Proper US	DOT Shipping	Name:	NON HAZ/N	ION DOT					
Class:	NA	UN/NA:	NA	PG:	NA	RQ:	NA		-
Flas	h Point	Į.	Н	Read	tive Suifides	Reactiv	e Cyanides	So	lids
	NA ·	6.5	-7.5	NA-	<u>mg/l</u>	NA	mg/l	NA	%
Oil &	Grease	T	OC		Zinc	C	pper	Ni	ckei
NA	mg/(	NA	mg/l	NA	<u>mg/l</u>	NA	mg/l	NA	<u>mg/l</u>
SECTION 4:	Physical and	Chemical Data	<b>1</b>						
	CON	IPONENTS TA	BLE			CONCEN	TRATOIN		UNITS
ΤI	ne waste consi	sts of the follo	owing materia	ıls		Ranges are	acceptable		or%

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
ISTAMUL 92	82	%
WATER	5	%
CALAMIDE C	10	%
ANTIFOAM AGENT	1	%
TEA	2	&
		<del></del>
		· ·
		<del>-</del> -
		<del></del>

If the handling of this w NA	vaste requires the use of special protective equipment, please explain.
SECTION 6: Attached S	upporting Documents es, data and/or analysis attached to this form as part of the waste
approval package.	MSDS
SECTION 7: Incompatil	
None Known	
Laboratory analysis of t	s Knowledge Documentation the hazardous waste characteristics, listed below, WAS NOT PERFORMED to generator knowledge:
TCLP Metals:	NA
TCLP Volatiles:	NA
TCLP Semi-Volatiles:	NA
Reactivity:	NA .
Corrosivity:	NA
ignitability:	NA
my knowledge and abili properties exist and the	
Authorized Signature:	
Printed Name/Title:	712/MCKANGHAD PRESIDENT
CES USE ONLY (DO NOT	WRITE IN THIS SPACES
Compliance Officer: Date: 6-17-08 Approval Number:	Pehhly Approved Rejected



11445 East Via Linda Suite 2150, Scottsdale, AZ 85259 480,361.4931

Tote

Date: 10.01.07

e-CORE® CARBO - LIQ PLUS-10

Version: 001 Page: 1 of 6

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: e-CORE® CARBO - LIQ Plus-10 COMPANY E-CORE 11445 East Via Linda Scottsdale, Arlzona 85239 United States

Emergency telephone number Chempac 001.703.527.3887

Telephone: 001/480.361.4931 Fax: 001/480.361.4968

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY: Carbohydrate solution Chemical characterization

CAS-No.

Chemical Name
TRADE SECRET

Walght %

Weight %

Classification

Further ingredients / Impurities

CAS-No.

Chemical Name

Classification

**Synonyms** 

3. HAZARDS IDENTIFICATION

Hazarda to people and the environment

None.

Additional advice

Bramba

) of Istamo

1/2 Aughbon

TEM

23 879 501

10% 5

85 %

Si licone Brodaline



Version, 001

Date: 10.01.07 of 6

9-CORE® CARBO - LIQ Plus-10

Page: 2

#### 4. FIRST AID MEASURES

General advice

#### inhalation

Only under extreme spray can this be harmful, Remove person out of contaminated area to fresh air. If discomfon occurs or persists, seek medical attention

#### Skin contact

Wash with water. Remove contaminated clothing and footwear. Wash clothing before reuse and discard footwear, which cannot be decontaminated. Seek medical attention if irritation occurs

#### Eye contact

Flush eyes theroughly with plenty of wear for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. If eye irritation persists, consult a specialist.

#### ingestion

Rinso mouth out with water. Consult a physician.

#### Notes to physician

Treat symptomatically.

#### 6. FIRE-FIGHTING MEASURES

Suitable extinguishing media Usc water spray, fog, foam, CO2 or dry chemical

#### Extinguishing media which must not be used for eafety reasons

Oxidizing materials and strong mineral acids.

Special dangers caused by the substance or preparation itself, results of fire/burning, or ensuing gases Non-determined

#### Special protective equipment for firefighters

In the event of fire, wear approved self- contained breathing apparatus with full-face mask and full protective equipment,

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use approved respirator.

#### Environmental precautions

N/D

#### Methods for cleaning up

Soak up residue with noncombustible absorbent meterial. Shovel up spills and sweep up cleanly, Avoid contact with incompatible materials. Place spilled material in a scal able steel container for proper disposal. After all visible traces have been removed flush area with clean water.

#### Additional advice

Never return spills in original containers for re-use.



Version: 001

Date: 10.01.07 of 6

e-CORE® CARBO - LIQ Plus-10

Page: 3

#### 7. HANDLING AND STORAGE

Handling

Safe handling advice

Avoid curring or welding of empty containers to prevent the possibility of causing fire, explosion or toxic fumes residue.

Advice on protection against fire and explosion Keep away from open flames and high temperatures.

Btorage

Requirements for storage rooms and containers

Store in a cool, dry, non-combustible building.

Advice on common storage

No materials to be specially mentioned. Observe regulations for keeping separated.

Special storage conditions Do not store in unlabeled containers

#### EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Control parameters Chamical Name

Weight % 100%

TLV

QEL

BEI

Trade secret

Personal protactive equipment

Respiratory protection

Use adequate local exhaust ventilation where dust, mists or spray may be generated. If ventilation is not available of is inadequate use an approved respirator.

Eye protection

Safety goggles or chemical goggles, and a splash rankmant face shield should be worn to prevent cyc/face contact.

Hand protection

Imperious gloves should be worn. Gloves may be decontaminated by washing with mild soap and water. Natural and Butyl rubber or neoprene has been suggested.

Skin and body protection

Coverally closed to the neck are preferred. A chemical apron should be worn when splashing of product is possible. Wear rubber boots or chemical registant shoes. Safety showers and eyewash facilities should be accessible

Industrial hygiene

Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.



Version; 001

Date: 10.01.07

C-COREO CARBO - LIQ Plus-10

Page: 4 of 6

PHYSICAL AND CHEMICAL PROPERTIES

Odor alight

PH @ 10% 8.5 - 7.5

Boiling point/range > N/A

Decomposition temperature --Oxidizing properties --

Flash point

Not determined None

Explosion limits Vapour pressure

N/A N/D N/D

Specific Gravity Water solubility

Pat colubility

Solubility in other solvents N/D

Partition coefficient (n-octanol/water) --

Viscosity 5US @ 100 deg.F: n/a

Other data

Color Hazy Liquid

Melting point/range - N/A Auto Ignition temperature -

Flammability (solid, gas) --

Vapour density (Air=1,0) > N/D

Bulk density -

STABILITY AND REACTIVITY 10.

Conditions to avoid

Materials to avoid

Hazardous decomposition products None known.

Further Information

Oxidizing materials and strong mineral acids

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Ingestion

LOSO orai

Skin contact

LD50 dermal

Inhalation

LC60 inhal.

Further information:

Primary irritation

Inhalation

Skin contact Eye contact

Further Information:

neitaspri

Chronic toxicity

Sensitization Carcinogenicity

Mutagenicity Reproductive toxicity

Narcosis

Further Information

Large amounts may cause diarrhea

May cause skin irritation from repeated or prolonged contact

irritation to lungs

No acute effects expected.

May cause skin uritation from repeated or prolonged contact

May cause slight irritation

Large amounts may anuse diarrhes.

no data available

no data avallable

no data available no data avaliable

no data available



Date: 10.01.07

e-CORE® CARBO - LIQ Plus-10

Version: 001

Page: 5 of 6

12, **ECOLOGICAL INFORMATION** 

BODS

no deta

COD

Aquatic toxicity Toxicity to flah

Toxicity to algae Toxicity to bacteria

Bioaccumulation no data available Mobility

no data available Persistence and degradability

Water pollution place (Germany) WGK:

Further Information

13. DISPOSAL CONSIDERATIONS

EWC waste disposal No: -

Waste from reaidues / unused products

Where possible recycling is praferred to disposal or incineration. If recycling is not practicable, dispose of in Compliance with the Environmental Protection (Duty of Care) Regulations 1991. Can be landfilled or incinerated, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

Contaminated packaging

Fully drained containers which are drop- and scrape- free can be treated as industrial waste, and can possibly be recycled.

14. TRANSPORT INFORMATION

UNAD No.: Labels:

N/A

N/A

Packaging group: N/A

Road/Rail-transport (ADR/RID)

ADRIRID Class:

Description of the goods:

Non-hazardous polyfunctional fluid

Further information -

Sea transport IMO/IMDG

IMDG class: --

IMDG page: --

Proper shipping name: Further information -

N/A

EmS: --

Sub risks: MFAG: -

Marine pollutant: not determined

Danger code: -

Air transport ICAO-TI/IATA-DGR

IATA Class:

Packing Instruction (passanger aircraft): Packing instruction (cargo aircraft):

Proper shipping name: Other information: -

Sub risks:

Number and letter: --

N/A



Version: 001

Date: 10.01.07 of B

e-CORE® CARBO - LIQ Plus-10

Page: 6

15. REGULATORY INFORMATION

Labeling according to EC Directives

CAS-No.

EC-No.

INDEX No.

Chemical Name

Not available Symbol(9):

R-phrase(s)

None

S-phrase(s)

None None

Exceptional labeling Additional advice

According to Regulation 5 of the CHIPS Regs 1994, the product is not alassified at dangerous for supply. Other national regulations

Water pollution class (Germany) WGK:

VbF class (German regulation) NU

Storage class VCI (Germany) 10/11 Storfallverordnung (Germany)

TA Luft: olass (Germany)

SWISS toxic class:

OTHER INFORMATION 16.

Contact person

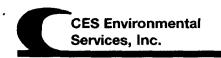
11445 East Via Linda

Suite 2150,

Scottsdale, AZ 85259

Approved 5668-100107

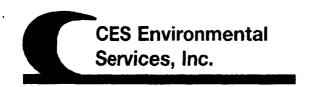
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and helief at the date of its publication. The information given is designed only as guidance for safe handling use, processing storage, transportation, disposal and release. It is not to be considered a warranty or quality specification. The information relates only to the specific material designated and my not be valid for such material used in combination with any other materials or in any process, unless specified in the test.



ı.	Base Pricing (including freight):
	\$65/dm
ı	
Į	
2.	Contamination Limits (maximum limit before surcharges apply):
1	N/A
Į	
_	
3.	Surcharge Pricing:
	None
ļ	
ľ	
1.	Special Testing Requirements:
	None-Be sure fits profile
- (	
L	
5.	Treatment and Handling Protocol:
ſ	Class 1 sludge Box
Ì	
1	
L	
<b>.</b>	Treated Wastewater Discharge Subcategory:
Г	Treated Trade water Discharge Subcategory.
- (	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C
	Subcategory A Subcategory C



	Tests for Product Recovered/Recovered (if applicable):
	Na
3.	Management for Product Recovered/Recycled (if applicable);
3.	Management for Product Recovered/Recycled (if applicable); Na
<b>3.</b>	
<b>3.</b>	
3.	
3.	



## **Material / Product Approval Letter**

Date 8/21/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2941

Expiration Date 8/21/2010

Producer: Afton Chemical Corporation

Address:

Suget, IL 62201

Material / Product Information

Name of Material / Product hitec 387 performance additive

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

out of date product

Color: amber

**Odor:** slight pungent

pH: neutral

**Physical State:** 

Incompatibilities: strong oxidizers
Safety Related Data/Special Handling:

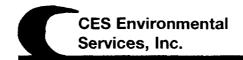
std

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.



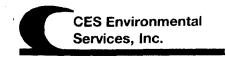
4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676  $\mathcal{O}($ 

http://www.cesenvironmental.com

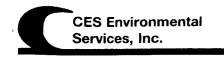
TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Mater	rial Producer Inforn	nation			
Company:	Afton Chemical Co	···	_		
Address:	501 Monsanto Ave	enue			
City, State, Zip:	Suget, Il 66201				
Contact:	Ed Cox		Title:		
Phone No:	(618) 583-1078		Fax No:	(618) 583-1388	
24/hr Phone:	(618) 583-1078				
U.S. EPA I.D. No:	na				
State I.D.	na		SIC Code:	na	
SECTION 2: Billing Company: Address:	g Information – 🛛 S	Same as Above			
City, State, Zip:		- Lance - Control - Contro		Name of the state	
Contact:		Title:	<del></del>	any 187. 187. 187. In the second seco	
Phone No:		Fax No:			
SECTION 2. C		Makadal / Dua da sk			
SECTION 3: Gener					
Name of Material / I Detailed Description	Product: 1414ec :	387 Perfermance ing or Producing the Materi	عرن + ناهاهام :ial / Product		
out of D					
•			l		
Physical State:	Liquid	Sludge =	Powder		
	☐ Solid	Filter Cake	Combinatio	on .	
Color: Amber	C	Odor: Slight Punge.	ıĄ		
Specific Gravity (wa	iter=1): <u>- 96</u> 4	Density: 8 lbs/gal			
Does this material co	ontain any total pher	nolic compounds?   Yes	No		
Does this material co	ontain any para subs	stituted phenolic compounds	s? 🗌 Yes 🖺	No	
Layers:	Single-phase	☐ Multi-phase			
Container Type:	□ Drum	☐ Tote ☐	Truck	Other (explain)	
Container Size:	<u>55 gal</u>				
		<del></del>			
Frequency:	☐ Weekly	☐ Monthly ☐	Quarterly	Yearly	
Number of Units (co		Other:	£		
ramber of Omes (co	manners, <u>v</u>				
		Produit			
Proper U.S. DOT Sh	ipping Name:	Combustible Liquids,	N.O.S.,(Sulfuri	ized olefins) Petroleum distilla	150
Class: 3	UN/N		PG: III		

Flash Point	pH Newty+1	N/A	N/A		Solids	
Oil&Grease	TOC	Zinc	Copper		Nickel	_%
<u> </u>	415 mg/l	O_mg/l	<u>O</u> mg	g/l	<u>mg/l</u>	
SECTION 4: Physics	al and Chemical I	<u>Data</u>				
	COMPONEN	ITS TABLE		Conc	entration	Units
	l / product consis	ts of the following materia		Ranges a	re acceptable	or %
TTEC 3.87	erformance	. Additive (See /	~50s	(00		96
			***********			<del>                                     </del>
SECTION 5: Safety	Related Data					
If the handling of this	material / produ	act requires the use of spe	cial protectiv	e equipment	t, please explain	
Standard Standard			<b>F</b> =		, <b>F</b>	-
SECTION 6: Attach	ad Suppositing Do	aanmants				
			·			<i>(</i> *)
List all documents, no <u>HiTEC 387 MSDS</u>	otes, data, and/or	analysis attached to this f	orm as part o	of the mater	ai / product pro	ome.
SECTION 7: Incomp	<u>patibilities</u>					
Please list all incompa	atibilities (if any):	:				
Strong Oxidizers						
SECTION 8: Materi	al Producer's Cei	rtification				
		ed on 🗌 generator knowle				
attached description is		curate to the best of my	knowledge an	d ability to		1 1 1 1
	ion proportion avi	at and that all known ar a				
omissions of composit		st and that all known or su lescribed by this document	ıspected hazaı			
omissions of composit tested are representativ	e of all materials of	described by this document.	ıspected hazaı	rds have been	n disclosed. I c	
omissions of composit tested are representativ	e of all materials of		ıspected hazaı	rds have been		
omissions of composit tested are representativ Authorized Signature	e of all materials o	described by this document.	ispected hazai	rds have been	n disclosed. I c	
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1.	Base Pricing (including freight):
	Base Pricing (including freight):  If brought in By CES on PCI back have: No charge/ no payment.  If brought in by ontside transporter at customer expense:  pay \$0.15/get
	no payment.
	If brought in by ontside transporter of customer expense.
	pay \$ 0.15/get
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
Į	
4.	Special Testing Requirements:
	Docard mantity in each drum. Number each drum
	Rocard quantity in each drum. Number each drum and record amount and product type on invendory
	115.
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l	
5.	Treatment and Handling Protocol:
	Once invendory has been given to product seles, the material will be resold so is, according to directed by product sales person.
	the material will be resold so is according as
	Availed by product sales verson.
İ	21, 20 03 produce 0
ا ۔	
6. 「	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



7.	Tests for Product Recovered/Recycled (if applicable):
	Sel Special testing vegnirements.
8.	Management for Product Recovered/Recycled (if applicable);
	See treatment & transling protocol



## Material Safety Data Sheet

**HiTEC 387 Performance Additive** 

MSDS No.

H387

HiTEC is a trademark owned by Afton Chemical Corporation or one of its subsidiaries.

#### Product and Company Identification

**Chemical Family** 

Petrochemical.

**Product Use** 

Petrochemical industry: Gear oil additive

CAS No.

Mixture.

Validation Date

3 June 2004

In Case of Emergency

1-800-403-0044 (US & Canada) 1-804-648-7727 (International) 32-2-507-20-64 (Europe)

Manufacturer / Supplier

Afton Chemical Corporation 500 Spring St. Richmond, VA 23219 1-804-788-5800

Afton Chemical Limited Euro-Tech Centre London Road, Bracknell, Berkshire RG12 2UW, England 44 1344-304141

#### Composition and Information on Ingredients

Note: See section 8 for occupational exposure limits and section 11 for LC50/LD50 information.

Substance/Preparation

: Preparation

**Ingredient Name** 

CAS No.

Conc. (% w/w)

**EU Classification** 

WHMIS

Mineral Oil

Mixture.

30-60

Not controlled under DSD

Regulated?

(Europe).

#### 3. Hazards Identification

Notice to Reader

Afton operates a world-wide system for hazard communication. Some hazards shown in Section 3 may apply to non-EU countries and may not result in classification and labeling in the EU. Please see Section 2 and 15 for country specific classification information, and Section 11 for additional details.

The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

**Primary Hazards and Critical Effects** 

: WARNING!

COMBUSTIBLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.

Physical/Chemical Hazards

Combustible.

**Environmental Hazards** 

Not classified as dangerous for the environment according to EC criteria.

**Hazardous Material** Information System (U.S.A.)

Health Reactivity

#### First Aid Measures

labalation

: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion

: If affected person is fully conscious, give one glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Skin Contact

: Wash with soap and water. Get medical attention if irritation occurs.

**Eye Contact** 

: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention immediately,

#### Fire-Fighting Measures

**Extinguishing Media** 

: In case of fire, use water spray (fog), foam, dry chemicals, or CO2.

Fire-Fighting Procedures

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Fire/Explosion Hazards

Combustible liquid and vapor. Vapor may cause fire.

Hazardous Decomposition Products

These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...), sulfur oxides (SO2, SO3...).

Flash point

Closed cup: 85°C (185°F). (Pensky-Martens. Minimum)

#### Accidental Release Measures

**Personal Precautions** 

Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5). Do not touch or walk through spilled material.

**Environmental Precautions** and Clean-up Methods

If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways.

Note: See section 1 for emergency contact information and section 13 for waste disposal.

#### Handling and Storage

Handling

Keep away from heat, sparks and flame. Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. To avoid fire, minimize ignition sources.

Storage

Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Keep container in a well-ventilated place.

#### **Exposure Controls and Personal Protection**

**Engineering Controls** 

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

**Personal Protective Equipment** 

Respiratory System

: Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s).

Skin and Body

Disposable outer garments when there is the potential for contact with the material.

Hands

Use chemical resistant, impervious gloves.

Eves

Safety glasses with side shields. Goggles with a face shield may be necessary depending on quantity of material and conditions of use

Occupational Exposure Limits

Ingredient Name

**OEL United States** 

OEL Canada

OEL Europe

Mineral Oil

ACGIH (United States). TWA: Ś mg/m³ STEL: 10 mg/m³ OSHA (United States).

TWA: 5 mg/m³

TWA: 5 mg/m³ STEL: 10 mg/m3 EH40 (UK) (Europe, 2002). TWA: 5 mg/m³ 8 hour(s).

Physical and Chemical Properties

Physical State and Appearance

: Liquid. (Clear.) Amber. (Light.)

Color Odor

Pungent. (Slight.)

Specific Gravity

: 0.964 at 15.6/15.6°C (target).

Solubility Viscosity

Insoluble in cold water.

Flash Point

: 7.17cSt at 100°C (target).

: Closed cup: 85°C (185°F), (Pensky-Martens, Minimum)

HiTEC 387 Performance Additive

In Case of Emergency 1-800-403-0044 (US/Canada) 1-804-648-7727 (Int'l) 32-2-507-20-64 (Eu)

Page: 3/5

#### Stability and Reactivity

Stability : The product is stable.

Materials to avoid : Strong oxidizing and reducing agents.

Conditions to avoid : High temperatures, sparks, and open flames.

#### 11. Toxicological Information

Routes of Entry : None known.

Target Organs : None known.

Acute Effects

Inhalation . Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Ingestion: Not determined.Skin Contact: Non-irritating to the skin.Eye Contact: Non-irritating to the eyes.

Chronic Effects

Adverse Effects : Not determined.

Carcinogenic Effects : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

**Toxicity Data** 

<u>Ingredient Name</u> <u>Test</u> <u>Result</u> <u>Route</u> <u>Species</u>

Not determined.

Other Information : Not available.

#### 12. Ecological Information

Environmental Hazards : Not classified as dangerous for the environment according to EC criteria. Based on calculation.

Environmental Fate : This product contains components which may be persistent in the environment.

Germany water class : Not determined.

#### 13. Disposal Consideration

Waste Handling and Disposal

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

#### 14. Transport Information

UN number	Proper shipping name	Class	Packing Group	Label	Additional information
NA1993	Combustible liquids, n.o.s. (Sulfurized olefins, petroleum distillates).	Combustible Liquid.	111		-
Not regulated.	-	-			-
Not regulated.	-	-			-
Not regulated.	-	-			-
Not regulated.	-	-			-
	NA1993  Not regulated.  Not regulated.  Not regulated.	NA1993 Combustible liquids, n.o.s. (Sulfurized olefins, petroleum distillates).  Not regulated.  Not regulated.  Not regulated.  Not -	NA1993 Combustible liquids, n.o.s. (Sulfurized olefins, petroleum distillates).  Not regulated.  Not regulated.  Not regulated.  Not regulated.  Not	NA1993 Combustible liquids, n.o.s. (Sulfurized olefins, petroleum distillates).  Not regulated.  Not regulated.  Not regulated.  Not	NA1993 Combustible liquids, n.o.s. (Sulfurized olefins, petroleum distillates).  Not regulated.  Not regulated.  Not regulated.  Not

Notice to Reader

The above transport information is provided to assist in the proper classification of this product and may not be suitable for all shipping conditions

#### 15. Regulatory Information

**EU Regulations** 

Risk Phrases : This product is not classified according to the EU regulations.

Safety Phrases : Not applicable.

US Regulations : No SARA 313 chemicals are present above the reporting threshold.

: SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Fire Hazard

State : California prop. 65: No products were found.

**Canadian Regulations** 

WHMIS (Classification) : Not determined.

#### International Inventory Status

United States : All components on TSCA Inventory

Canada : All components on DSL

Europe : All components on EINECS

Japan : All components on MITI or MOL

Australia : All components on NICNAS

Korea : All components on ECL

China : All components on IECSC

Philippines : All components on PICCS

#### 16. Other Information

#### PREPARATION INFORMATION

Validated by _HS&E Department (Tel: +1 804 788 5800) on

6/3/2004.

Version : 1

Date of Printing : 6/3/2004.

Indicates information that has changed from previously issued version.

#### Notice to Reader

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. Afton makes no representation as to completeness or accuracy. In no event will Afton be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

#### ADDRESS CONTACT INFORMATION

In the United States and Canada: Afton Chemical Corporation 500 Spring Street Richmond, Virginia USA 23219-2183

Telephone number: 804-788-5800

In Singapore:

Afton Chemical Asia Pacific Company 111 Somerset Road #13 - 03

Singapore 238164

Telephone number: 65-6732-0822

In Australia:

Afton Chemical Asia Pacific Company Level 9, 20 Berry Street

North Sydney, NSW 2060 Australia

Telephone number: 02-9923-1588 Business Hours: 9:00am - 5:00pm In Europe: Afton Chemical Limited Euro-Tech Centre London Road, Bracknell, Berkshire RG12 2UW, England 44-1344-304141

In Japan

Afton Chemical Japan Corporation Sumitoma Fudousan Sanbancho Bldg. 5F

6-26 Sanbancho, Chiyoda-ku Tokyo 102-0075 Japan

Emergency phone: 81-3-5210-4890

*** END OF MSDS ***



Al

## **Material / Product Approval Letter**

Date 8/21/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2941

Expiration Date 8/21/2010

Producer: Afton Chemical Corporation

Address:

Suget, IL 62201

Material / Product Information

Name of Material / Produc.

Add itives-Toxic

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

out of date product

Color: amber

Odor: slight pungent

pH: neutral

Mobily

**Physical State:** 

Incompatibilities: strong oxidizers
Safety Related Data/Special Handling:

std

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services. Inc.



4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021

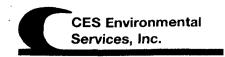
Fax: (713) 676-1676

http://www.cesenvironmental.com

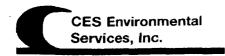
TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900  $\mathcal{O}(2)$ 

Company:	Afton Chemical (	mation		
Address:	501 Monsanto Av			
City, State, Zip:	Suget, Il 66201	Citac		
Contact:	Ed Cox		Title:	
Phone No:	(618) 583-1078		Fax No:	(618) 583-1388
24/hr Phone:	(618) 583-1078		rax No.	(018) 383-1388
U.S. EPA I.D. No:				
	na		CIC Code	
State I.D.	na		SIC Code:	na
<b>SECTION 2: Billin</b>	g Information – 🖂	Same as Above		
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City, State, Zip:				
Contact:		Title	•	
Phone No:		Fax	No:	
SECTION 3: Gener	ral Description of th	ne Material / Product		
	A 11:	tivo- Toxic		
Name of Material / l Detailed Description		<b>~</b> −		
-		•	wraterial / Product.	- Manufacture -
1/01+ of 0				
Physical State:	Liquid	☐ Sludge	Powder	
	☐ Solid	Filter Cake	Combinatio	On .
Color: VW1%		Odor: varis	4	
Color: VW &  Specific Gravity (wa				
-	iter=1) $\sqrt{u}$ L	Density: Walko	s/gal	
Specific Gravity (wa	ontain any total pho	, Density: WALO	s/gal ] Yes	- No
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Specific Gravity (wa	ontain any total pho	Density: WALO	s/gal ] Yes □ No npounds? □ Yes [	No
Specific Gravity (wa Does this material co Does this material co Layers:	ontain any total pho ontain any para sub Single-phase	Density: WAWO  enolic compounds?   estituted phenolic com  Multi-ph	s/gal ] Yes □No npounds? □ Yes [ nase	_
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Flash Point	23-11	N/A	N/A	Solids	0/0
Oil&Grease	TOC LUSSing/l	Zinc _O_mg/l	CopperOmg/l	Nickelmg/l	_/0
SECTION 4: Physic	al and Chemical	<u>Data</u>			
	COMPONEN	TS TABLE ts of the following materi	D	Concentration	Units
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-	_ ruci mo	<i>(</i> 1,1,1)			
					<del>                                     </del>
		<u></u>			
SECTION 5: Safety	Related Data				
If the handling of this	material / produ	ct requires the use of sp	ecial protective equ	ıipment, please explain	
Standard	-		-		
SECTION 6: Attach	ed Supporting Do	cuments			
List all documents, no	otes, data, and/or	analysis attached to this	form as part of the	e material / product pro	ofile.
Ste MSDS ms	, nared drive	: Customer MSD	is: Afton		
SECTION 7: Incomp	<u>oatibilities</u>				
Please list all incompa Strong Oxidizers	ntibilities (if any):				
SECTION 8: Materia	al Producer's Cer	tification			
The information containattached description is omissions of composite	ined herein is base complete and action properties exis	ed on generator knowled generator knowled curate to the best of my st and that all known or stescribed by this document	knowledge and ab uspected hazards ha	ility to determine that r	no deliberate or willfi
Authorized Signature	: NOTE	uprised pro	hut	Date:	
Printed Name/Title:				_	
				m.	
CES USE ONLY (DO NOT					
Technical Manager:					
Date: 8-21-08	Ap	proved Rejected			
Approval Number:	2941				



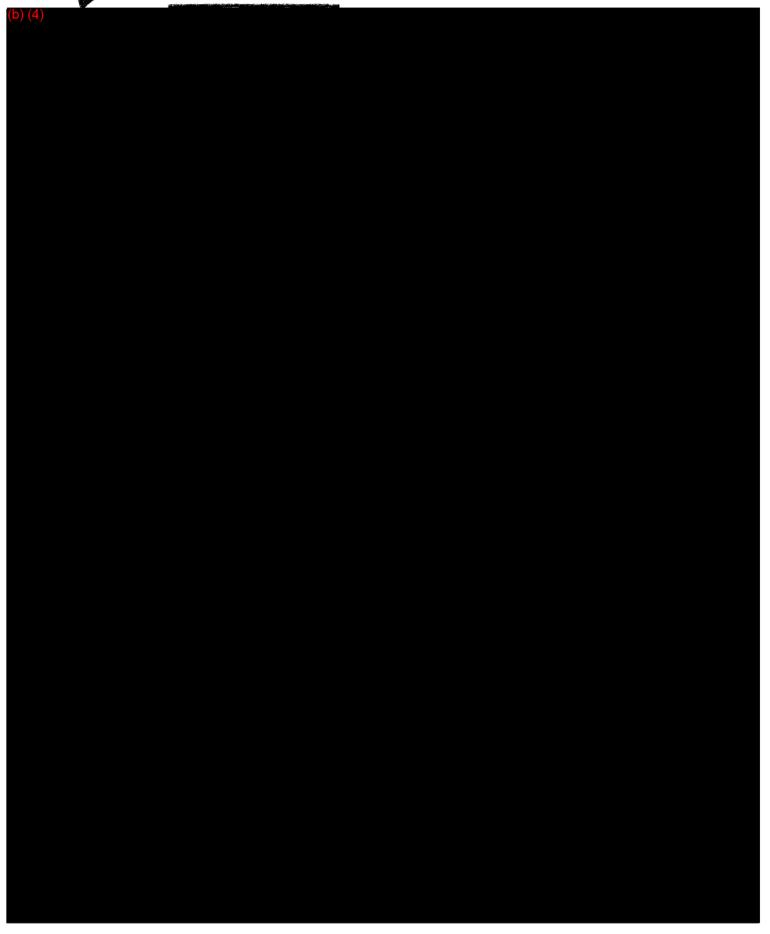
1.	Base Pricing (including freight):
	If brought in By CES on PCI backhaue: no charge/
	no payment.
	1 pay \$0.15/get Pay \$, 519/ pound.
	Pag 10.13/J4
2.	Contamination Limits (maximum limit before surcharges apply):
	If the drums are damaged and in an overfect and operations deceided too many man have are used to recome meterial then these will be no payment.
	decides too many man have are used to recome meterial
	then these will be no payment.
•	Sample Delivery
<b>J</b> .	Surcharge Pricing:
4.	Special Testing Requirements:
	Rocard quantity in each down. Number each drum and record amount and product type on inventory
	and record amount and product type on inventory
	US all a Conformation of other Cate tax with not be generated
	and the cotal gallows secured. Hast desity off. On inhouse
_	Desdress Red Golding received. Host desity of Orinhoung
5.	
	Once invendory has been given to product sales, the material will be resold to is, according to directed by product sales person.
	the material will be resold to is, according
	directed by product sales person.
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



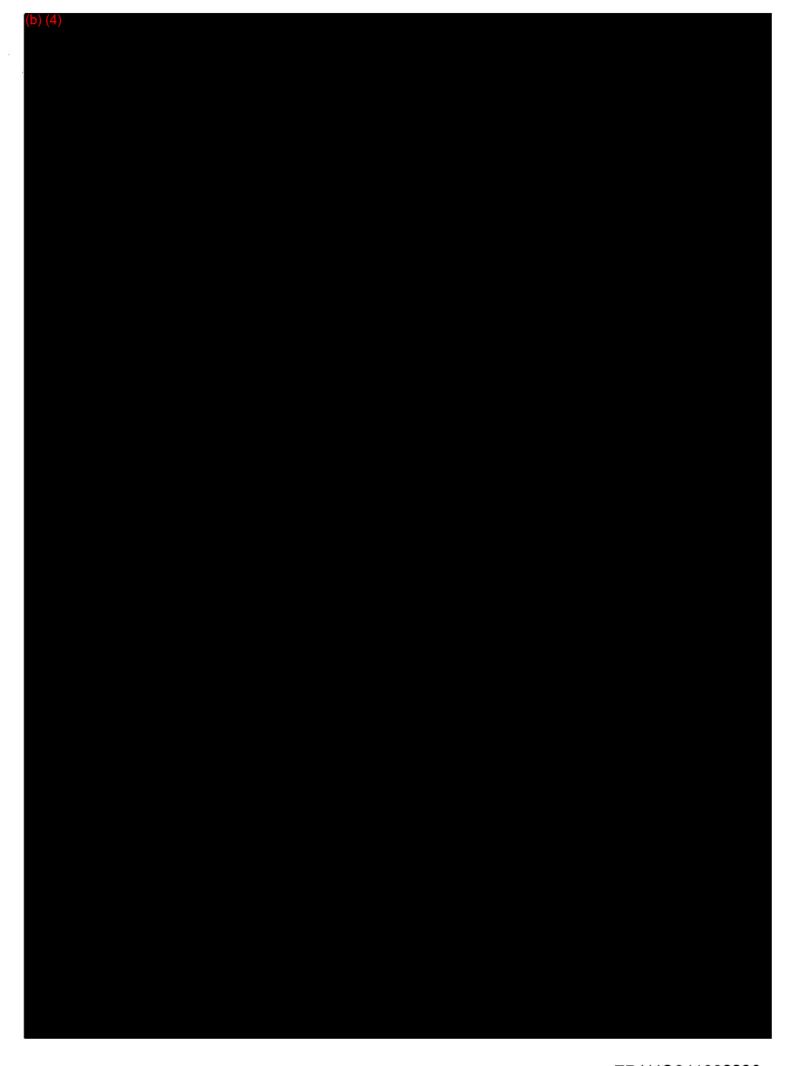
7.	Tests for Product Recovered/Recycled (if applicable):
	Sel Special testing requirements.
8.	Management for Product Recovered/Recycled (if applicable);
	See treatment & nandling protocol

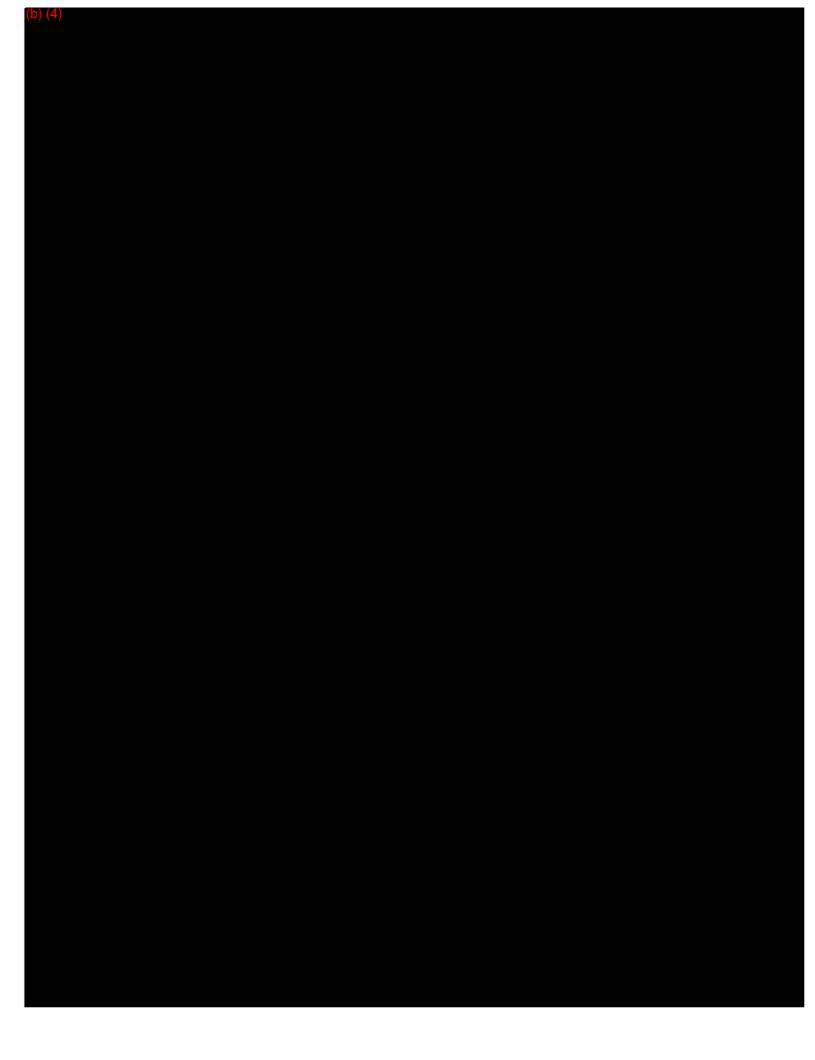


# One example Material Safety Data Sheet











*** END OF MSDS ***





## **Material / Product Approval Letter**

Date 8/22/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2945

**Expiration Date** 8/21/2010

**Producer:** Afton Chemical Corporation

Address:

Suget, IL 62201

#### Material / Product Information

Name of Material / Product hitec 307 performance additive

**Container Type:** 

#### Detailed Description of Process Generating or Producing the Material / Product:

out of date product

Color: clear

Odor: pungent

pH: neutral

**Physical State:** 

Incompatibilities: strong oxidizers
Safety Related Data/Special Handling:

std

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

## CES Environmental Services, Inc.

JB

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

<b>SECTION 1: Mater</b>	rial Producer Inforn	<u>nation</u>			
Company:	Afton Chemical C	orportation			
Address:	501 Monsanto Av	enue			
City, State, Zip:	Suget, Il 66201				
Contact:	Ed Cox		Title:		
Phone No:	(618) 583-1078		Fax No:	(618) 583	3-1388
24/hr Phone:	(618) 583-1078				
U.S. EPA I.D. No:	na		<del></del>		
State I.D.	na		SIC Code:	na	
SECTION 2: Billing	g Information – 🛛 S	Same as Above			
Company: _					
Address:				_	
City, State, Zip:					
Contact:		Title:			
Phone No:		Fax No:			
<del>-</del>			777		
SECTION 3: Gener	al Description of th	e Material / Product			
Name of Material / 1	Product Hitec	3 07 Performance 1	add: fire		
Detailed Description	of Process Generat	ing or Producing the Ma	terial / Product		
Detailed Description	O. I	L a Calatta	terrary Troduct.		
	0V	t ofdate proc	ILL		
Physical State:	Liquid Liquid	☐ Sludge	☐ Powder		
rnysical State.	=				
	☐ Solid	☐ Filter Cake	Combinatio	n	
Color: CRAV	(	Odor: Pangent			
Specific Gravity (wa	tor=1): \	Density: 8,3> lbs/gal	<b>.</b>		
specific Gravity (wa		Density. 2.04- 103/ gal	L .		
Does this material co	ontain any total phe	nolic compounds? 🔲 Ye	s 🖃 No		
	_	•			
Does this material co	ontain any para sub	stituted phenolic compou	nds? 🗌 Yes 🖸	No	
Layers:	Single-phase	☐ Multi-phase			
Containan Tyma	□ Drum	☐ Tote	Tunal:		Othor (avalois)
Container Type:			Truck	لــا	Other (explain)
Container Size:	<u>55 gal</u>	- <del></del>			
E-aguana	Washin	Monthle.	O		V-coule.
Frequency:	☐ Weekly		<b>Quarterly</b>		Yearly
Number of Units (co	ntainers):	Other:			
		Product			
Darrier II d IN OPE OF			1- NOC (0.16	1.1.6	
Proper U.S. DOT St	upping Name:	Combustible Liquid	ıs, N.O.S.,(Sulfuri	ized oletins,	)
Class: 3	UN/N	A: NA1993	PG: III		RO: 1000 lbs

Flash Point	NC-14n1	N/A	N/A		Solids	%	
Oil&Grease	TOC	Zinc	Copper	Nicke		70	
71500mg/l	Listed mg/l				mg/l		
SECTION 4: Physical and Chemical Data							
	COMPONENT	STABLE		Concentration		Units	
		of the following materia		Ranges are acce	ptable	or %	
Hiter 307 Pe	starmance An	whitive I See MS	00	100		9(4	
SECTION 5: Safety	Dalatad Data						
If the handling of this		requires the use of spec	cial protective	equipment, please	e explain.		
Standard							
SECTION 6: Attach	ed Supporting Docu	iments					
List all documents, no HiTEC 307 MSDS	otes, data, and/or a	nalysis attached to this fo	orm as part of	f the material / pro	duct prof	ile.	
SECTION 7: Incomp	<u>patibilities</u>						
Please list all incompatibilities (if any): <a href="https://example.com/strong-oxidizers">Strong Oxidizers</a>							
SECTION 8: Material Producer's Certification							
The information contained herein is based on $\square$ generator knowledge and/or $\boxtimes$ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.							
Authorized Signature	::		·	Date:			
Printed Name/Title:				Manusey range			
CES USE ONLY (DO NOT	T WRITE IN THIS SPA	CE)		*****			
Technical Manager:	rabuilly						
Technical Manager: February  Date: 8 - 21 - 08 Approved Rejected							
	- 1111						
Approval Number:	. 6945						



1.	Base Pricing (including freight):
	Base Pricing (including freight):  If brought in By CES M PCI back have: no charge/ no payment.  If brought in by ontside transporter at customer exponse:  pay \$0.15/gef
	no payment.
	pay \$ 0.15/get
2.	
3.	Surcharge Pricing:
4.	Special Testing Requirements:
	Rocard quantity in each down. Number each drum and record amount and product type on inventory
	and record amount and product type on inventory
	US.
5.	Treatment and Handling Protocol:
	Once invendory has been given to product sales,
	the material will be resold so is, according as directed by product sales person.
	directed by product sales person.
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C

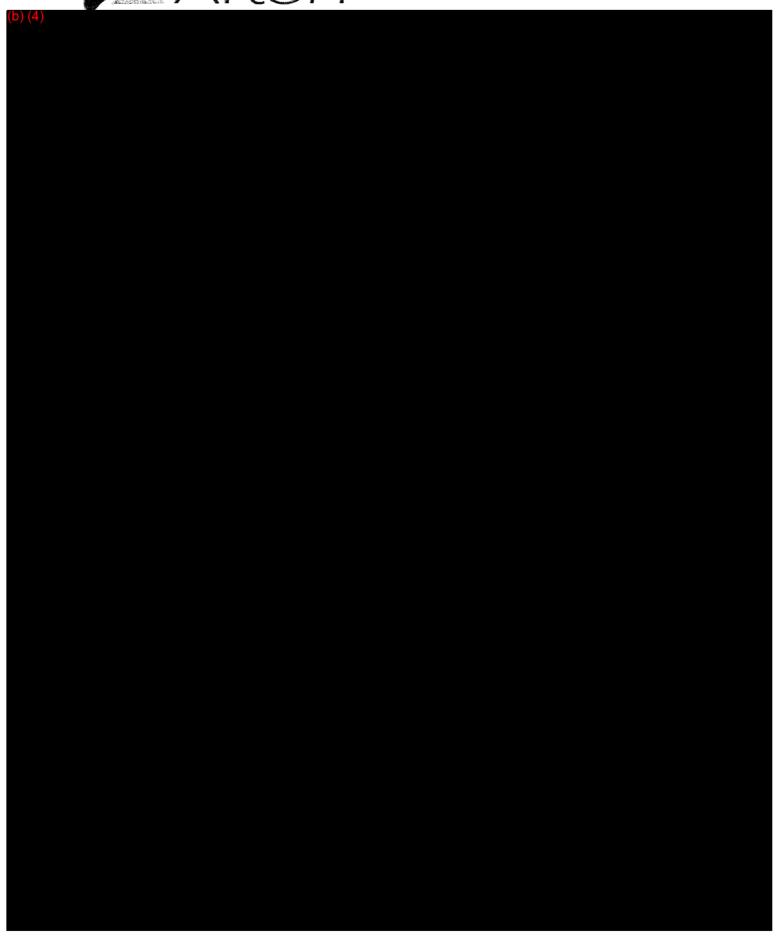


7.	Tests for Product Recovered/Recycled (if applicable):
	Sel Special testing requirements
į	
3.	Management for Product Recovered/Recycled (if applicable);

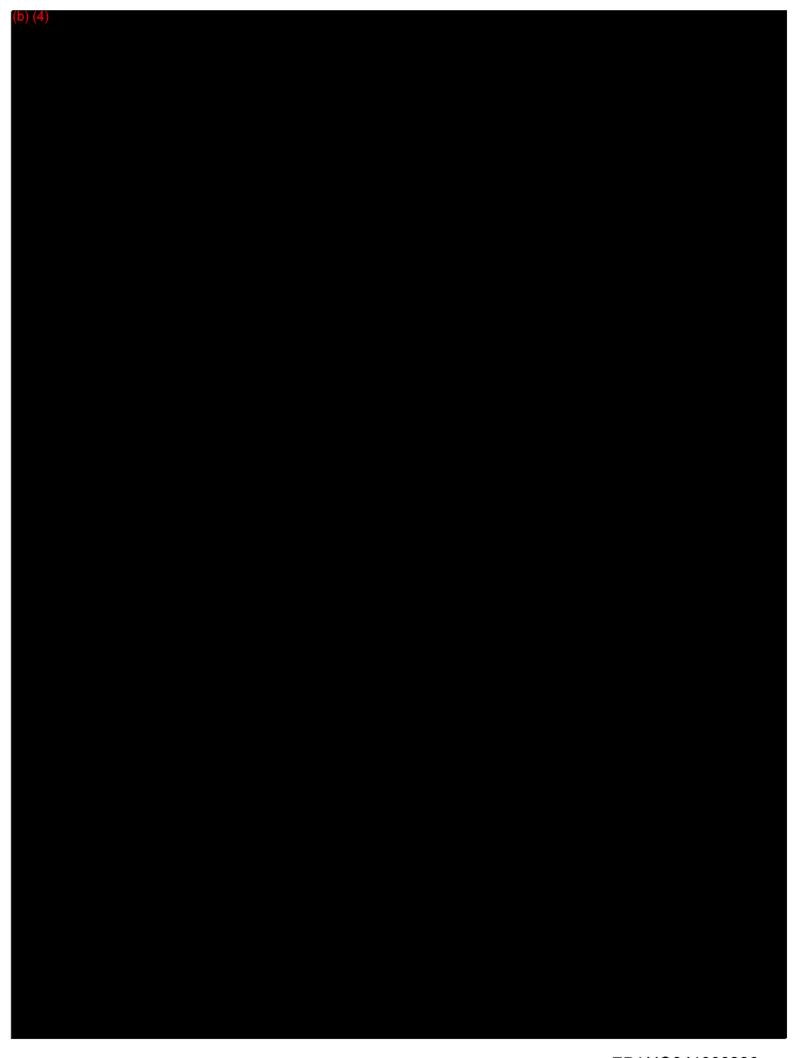
See treatment & nanding protocol	

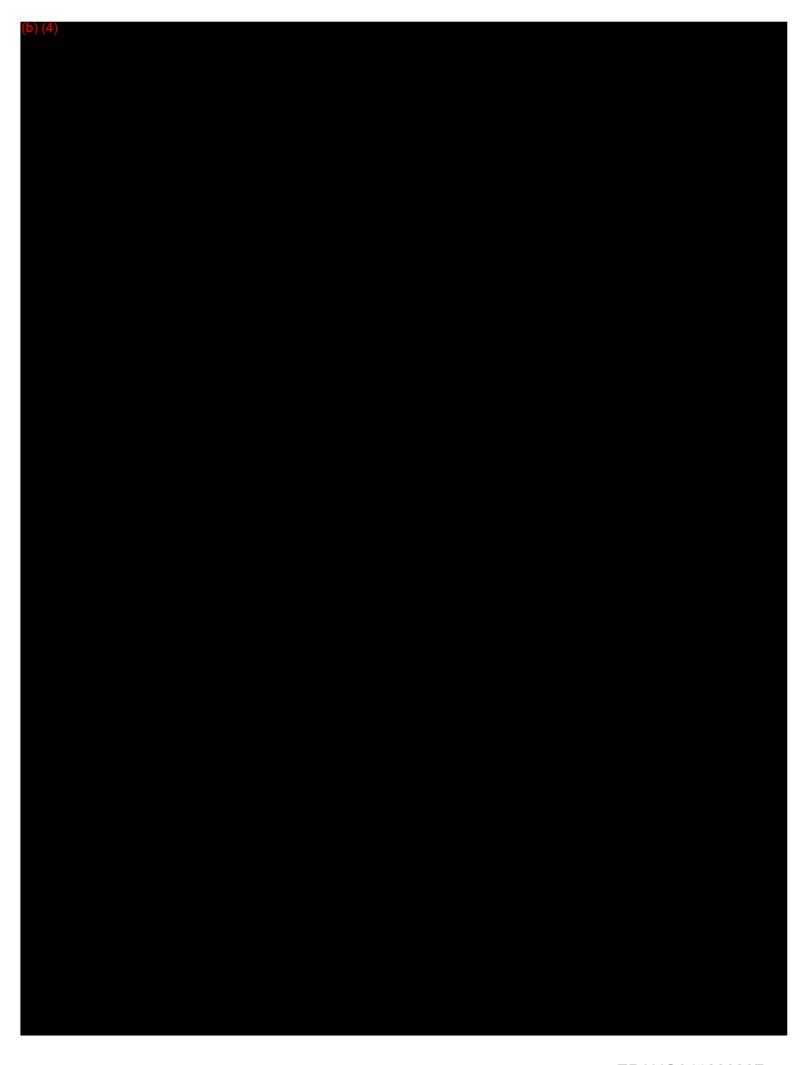


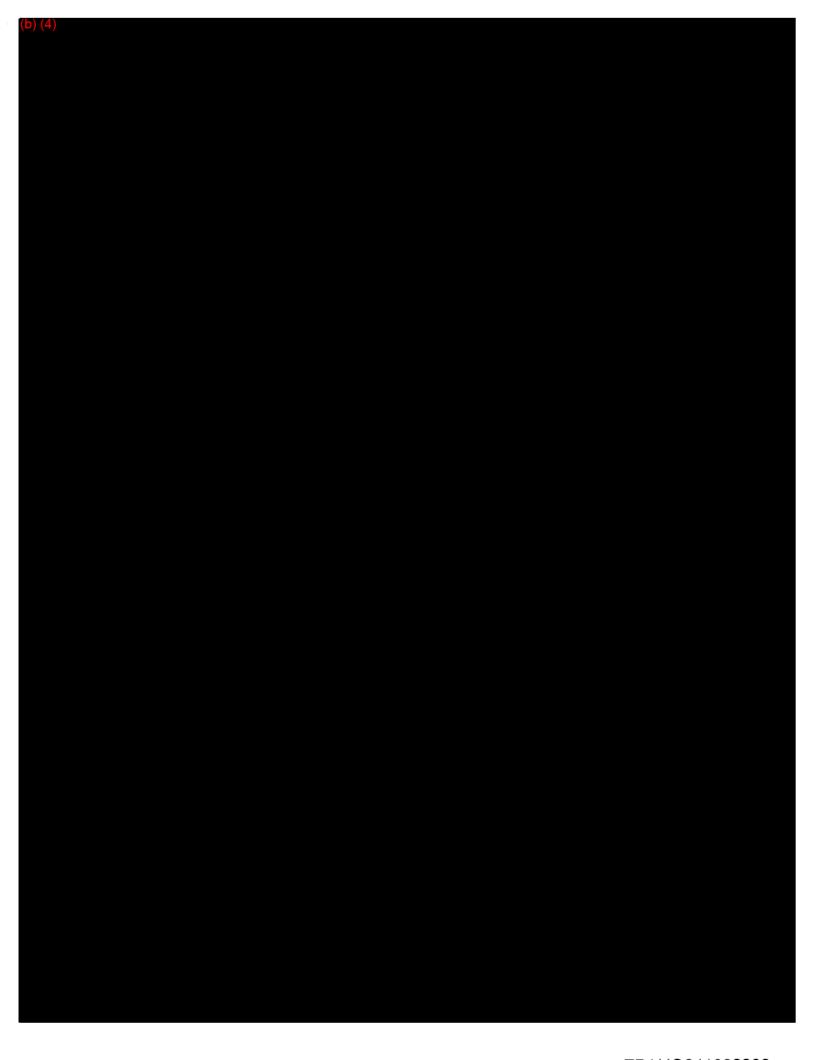
# **Material Safety Data Sheet**













* * * END OF MSDS * * *



AL

4904 Griggs Road Houston TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1460

# **Material / Product Approval Letter**

Date 8/22/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile# 2945

Expiration Date 8/21/2010

**Producer:** Afton Chemical Corporation

Address:

Suget, IL 62201

Material / Product Information

Name of Material / Produc Additives - combustible

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

out of date product

Color: clear

Odor: pungent

pH: neutral

**Physical State:** 

Incompatibilities: strong oxidizers
Safety Related Data/Special Handling:

std

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.

# CES Environmental Services, Inc.

JB

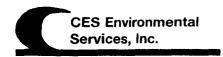
4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Mater	rial Producer Inform	ation			
Company:	Afton Chemical Co	rportation	-		-
Address:	501 Monsanto Aver	nue			
City, State, Zip:	Suget, Il 66201				
Contact:	Ed Cox		Title:		
Phone No:	(618) 583-1078		Fax No:	(618) 583	-1388
24/hr Phone:	(618) 583-1078				
U.S. EPA I.D. No:	na				
State I.D.	na		SIC Code:	na	
SECTION 2: Billing	z Information – ⊠ S	ame as Above			
Company:					
Address:					
City, State, Zip:					
Contact:		Title:			
Phone No:		Fax No:			
<b>SECTION 3: Gener</b>	al Description of the	Material / Product			
			· •		
Name of Material / P	roduct: Hoditi	16 - Combustible			
<b>Detailed Description</b>	of Process Generation	ng or Produçing the Materi	ial / Product:		
20	- sport / Aut	- ofdate produ	, 4	<del></del>	
$\mathcal{O}_{\mathcal{U}}$	Spec / UUT	of and proces	U		
Physical State:	Liquid	☐ Sludge I ☐	Powder		
I II) STORE STORES	☐ Solid	Filter Cake	Combinatio		
	Sonu	_ Filter Cake	Combinatio	11	
Color:	o	dor:			
		•			
Specific Gravity (was	ter=1)	Density /gal			
Specific Gravity (was		pensity # gar			
Does this material co	ntain any total phen	olic compounds? 🗌 Yes	No		
			. Cl v.	<b>-</b> /	
Does this material co	ntain any para subst	tituted phenolic compounds	s? L Yes	No	
Layers:	Single-phase	☐ Multi-phase			
Containor Tunos	⊠ Drum	☐ Tote ☐	Truck		Other (evaluin)
Container Type:	<del></del>		Truck		Other (explain)
Container Size:	<u>55 gal</u>				
T	<b>XX</b> /==1-1=.	□ Month! □	Outside		<b>X</b> 7 <b>1</b>
Frequency:	☐ Weekly	☐ Monthly ☐	Quarterly		Yearly
Number of Units (co	ntainers):	Other:			
		Product			
Proper U.S. DOT Shi	ipping Name:	Combustible Liquids, I	N.O.S.,(Sulfuri	zed olefins)	
Class: 3	UN/NA	NA1993	PG: III		<b>RQ</b> : 1000 lbs

Flash Point 4 200 ° C	рн 3-11	N/A	N/A	The second secon	Solids	
Oil&Grease	TOC	Zinc	Copper	Nickel	/0	
71500 _{mg/l}	LK 69mg/l		mg/l		mg/l	
		_				
SECTION 4: Physi						Official schools are
The materi	COMPONEN	TS TABLE ts of the following materia	le l	<u>Concentratio</u> Ranges are accep		Units or %
See MS1	- · · · · · · · · · · · · · · · · · · ·	as of the following materia		icanges are accep	reable	or , o
Perfirm		Additive		100		%
	-1100/1001	11001111		100		7.0
		The state of the s	20.000			
SECTION 5: Safety						
•	is material / produ	ct requires the use of spec	cial protective ed	quipment, please	explain.	
Standard						
SECTION 6: Attacl	ned Supporting Do	cuments				
List all documents, n	iotes, data, and/or	analysis attached to this fo	orm as part of th	ne material / prod	duct profile	<b>2.</b>
Sex MSDS	i on Shar	ed drive : Costome	W.SAC . A	fton		
SECTION 7: Incom		- 0 0 9 1 Q	er 1445003	(10)		
Please list all incomp						
Strong Oxidizers	acionicies (ii any).					
SECTION 9. Matan	ial Draduaania Can	tification				
SECTION 8: Mater						
		d on  generator knowled curate to the best of my k				
omissions of composi	ition properties exis	st and that all known or sus				
tested are representative	ve of all materials d	escribed by this document.				
Authorized Signatur	e: No sian	ane regid-p	roduct	Date:		
		•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Printed Name/Title:				SWS-inte		
CES USE ONLY (DO NO	T WRITE IN THIS SP	PACE)				
Technical Manager:	bahr Bh					
Date: 8-21-0	OS (Ap	proved Rejected				
Approval Number	2945					



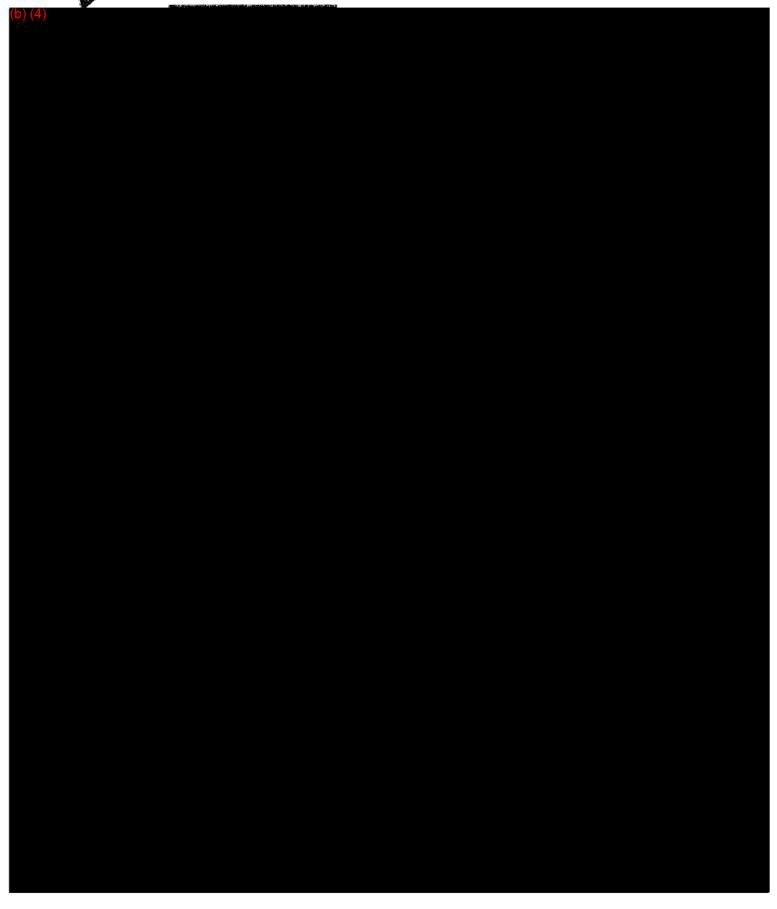
1.	Base Pricing (including freight):
	Base Pricing (including freight):  If brought in By C&S on PCI back have: No chaze!  no payment.  If brought in by ontside transporter at customer expanse:  pay #0.15/get Pay 8,019/get parend
	no payment.
	If brongered in by oneside transporter as considered
	1 pay \$0.15/get Pay \$,019/ get paring
2.	Contamination Limits (maximum limit before surcharges apply):
	Il drums are dom-god and are in an onerpach and operations determines too many manhouse are used to recover the material then there will be not that payment.
3.	Surcharge Pricing:
4.	Special Testing Requirements:
	Rocard quantity in each drum. Number each drum and record amount and product type on invendory US. Borg to Fotol pallows to the tells record them a capy of the
	and record amount and product type on inventory
	154 Bong to Fotal rations of the top record town a capy of the
	work order. The tab with most he ple an inband for total galling
	Mille descin Off the super to the popular to the total of the
5.	Treatment and Handling Protocol: Vegical to an in bound to shop the test of the Treatment and Handling Protocol:
	Once invendory has been given to product seles,
	the material will be resold so is according es
	Once invendory has been given to product seles, the material will be resold so is, according to directed by product seles person.
6.	Treated Wastewater Discharge Subcategory:
;	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C

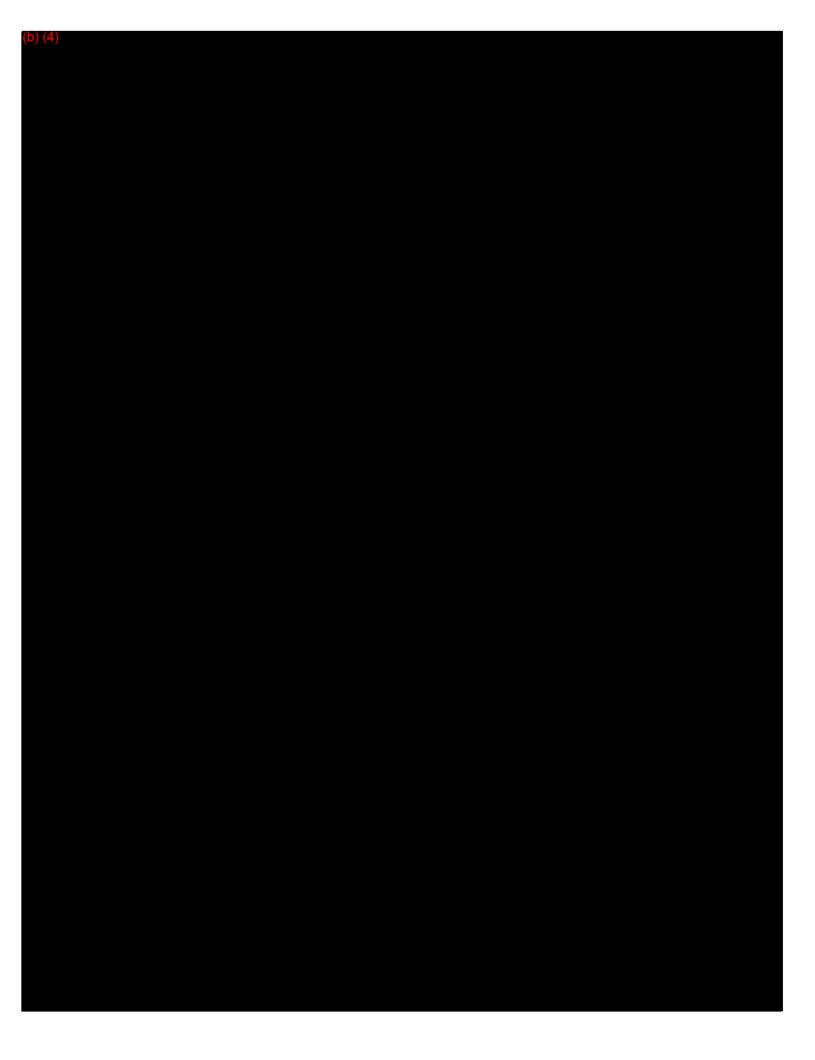


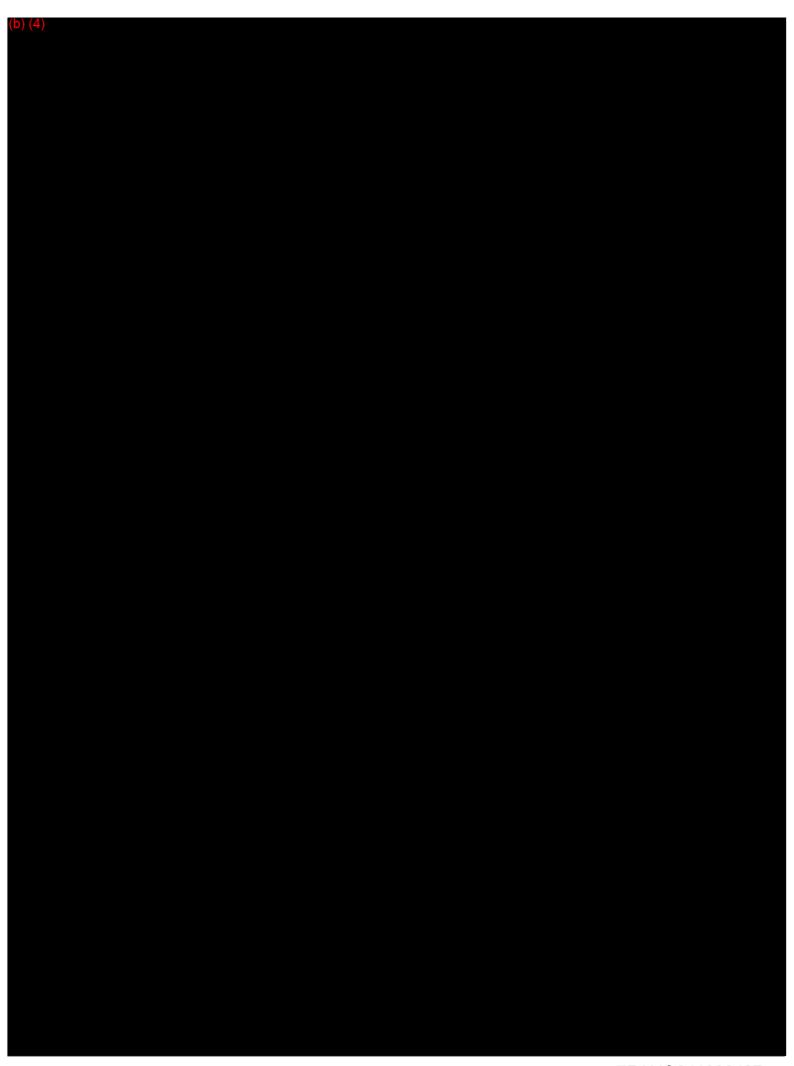
7.	Tests for Product Recovered/Recycled (if applicable):
	Su Special testing requirements
3.	Management for Product Recovered/Recycled (if applicable);
	isce treatment & manding protocol
	· ·



# One example Material Safety Data Sheet

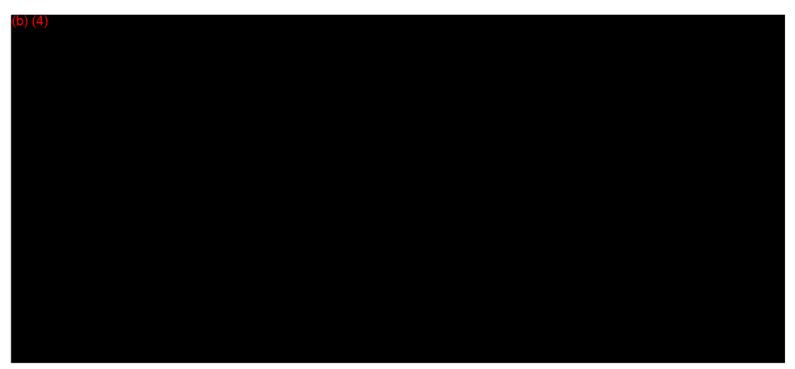




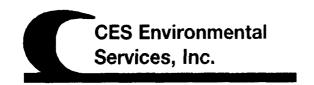








*** END OF MSDS ***



## **Material / Product Approval Letter**

Date 9/9/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2981

**Expiration Date** 9/9/2010

**Producer:** Afton Chemical Corporation

Address:

Suget, IL 62201

Material / Product Information

Name of Material / Product Afton viscosity modifier

**Container Type:** 

**Detailed Description of Process Generating or Producing the Material / Product:** 

Afton viscosity modifier

Color: varies

**Odor:** varies

**pH**: 3-11

**Physical State:** 

Incompatibilities: strong oxidizers
Safety Related Data/Special Handling:

std

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. MY

# CES Environmental Services, Inc.

JB

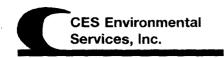
4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

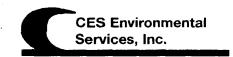
TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Materi	ial Producer Informa	ation			
Company:	Afton Chemical Co	rportation			
Address:	501 Monsanto Aver	nue			
City, State, Zip:	Suget, Il 66201				
Contact:	Ed Cox		Title:		
Phone No:	(618) 583-1078		Fax No:	(618) 583	-1388
24/hr Phone:	(618) 583-1078				
U.S. EPA I.D. No:	na				
State I.D.	na		SIC Code:	na	
<b>SECTION 2: Billing</b>	Information – 🛛 Sa	ame as Above			
Company:					
Address:					
City, State, Zip:					
Contact:		Title:			
Phone No:		Fax No:			
SECTION 3: Genera	al Description of the	Material / Product			
			_		
Name of Material / P	roduct: Aften	Viscosity Mod	ifier		
		ng or Producing the Materia			
•		3	~		
Physical State:	🛛 Liquid	☐ Sludge ☐	Powder		
•	☐ Solid	☐ Filter Cake ☐	Combination	1	
			Combination	•	
Color: VMilo	0	dor: Vaniv			
Color. 4 120	0	uor. <u>V (07</u> 10 2			
Specific Gravity (wat	and Middle	Density VM i Walbs/gal			
Specific Gravity (wat	er=1): <u>γω</u> '••	Density y 100 lbs/gai			
			<b>-</b>		
Does this material co	ntain any total phen-	olic compounds? 🔲 Yes	Ŋ No		
			. —	<del>/</del>	
Does this material con	ntain any para subst	ituted phenolic compounds?	? ∐Yes ☑	9 No	
_	<del>d</del>	□ <b></b>			
Layers:	Single-phase	☐ Multi-phase			
	_	_			
Container Type:	⊠ Drum	Tote	Truck		Other (explain)
Container Size:	<u>55 gal</u>				
			_	_	
Frequency:	☐ Weekly	Monthly	Quarterly		Yearly
Number of Units (cor	ntainers): \/\langle	Other:			
•	•	n .			
	<del></del>	hodint			
Proper U.S. DOT Shi	pping Name:	Non RCRA Non DOT I	Regulated Mat	erial	
Class: na	UN/NA	na na	PG: na	-	RQ: na

Flash Point	pH	N/A	N/A		Solids	
> 200° F	3-11	7:		Nielral	4	%
Oil&Grease	TOC _ <i>NA</i> _mg/l	Zinc Np mg/l	Copper <i>NA</i> _mg/l	Nickel NB	mg/l	
213208/-			1			
SECTION 4: Physic	al and Chemical J	Data				
	COMPONEN			Concentratio	n	Units
	<del></del>	ts of the following materia	als R	anges are accep	table	or %
	5105)	<del></del>		<del> </del>		
Viscosit	n Modifi	lv		100		0/2
						<del></del>
SECTION 5: Safety	Related Data					
		ict requires the use of spe	cial protective eq	uipment, please	explain.	
<u>Standard</u>	s material, produ	ter requires the use of spe	ciai protective eq.	arpinent, picuse	сарши	•
CECTION (. Admin	od Communities or Do					
SECTION 6: Attach					_	-
List all documents, n	otes, data, and/or	analysis attached to this f	orm as part of the	e material / prod A. (40)	duct pro	file.
see MSDS	on Sharea	appre . Co sour	100 May 102	Ann		
SECTION 7: Incom	<u>patibilities</u>					
Please list all incomp	atibilities (if any):	:				
Strong Oxidizers						
SECTION 8: Materi	ial Producer's Cei	rtification				
The information conta	ined herein is base	ed on  generator knowle	dge and/or 🛛 ana	lvtical data. I he	ereby cei	tify that the above ar
attached description i	s complete and ac	curate to the best of my	knowledge and ab	ility to determin	ne that n	o deliberate or willf
		st and that all known or su described by this document.		ave been disclos	sed. I ce	ertify that the materia
-		•				
Authorized Signature	e: None regr	rived product		Date:		
Printed Name/Title:	U					
Frinted Name/Title:				-		
CES USE ONLY (DO NO	T WRITE IN THIS S	PACE)				
	)	l l				
Technical Manager:	old RI	ext				
Date: 9-9-08	Aı	oproved Rejected				
		Rojouda				
Ammunual Numbani	7	981				



1.	Base Pricing (including freight):
	Pay \$0.15/gal =0B CES
	Pay \$0.15/gal FOB CES No charge /No payment if backhauled by CES
	Pay \$.019/ pound
2.	Contamination Limits (maximum limit before surcharges apply):
	It damaged drive are in an overpach and operations determines that too many man hours are needed to recover the materials they where will be no payment.
3.	Surcharge Pricing:
4.	Special Testing Requirements:
	Pull retain sample. Record drum number and quantity on drum inventory and give to product sales.
	on drum inventory and give to product sales.
5.	Treatment and Handling Protocol:
	Either Communicate with product sales person to determine
	it had to be bulked, dehead drums and bulk into
	is a containers, Notify product sals when vady to ship
5.	if material needs to be bulked or sold-as-is. If needs to be bulked, dehead drums and bulk into is a containers, Notify product sale when very tookip  Strape drums before Shredding  Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C

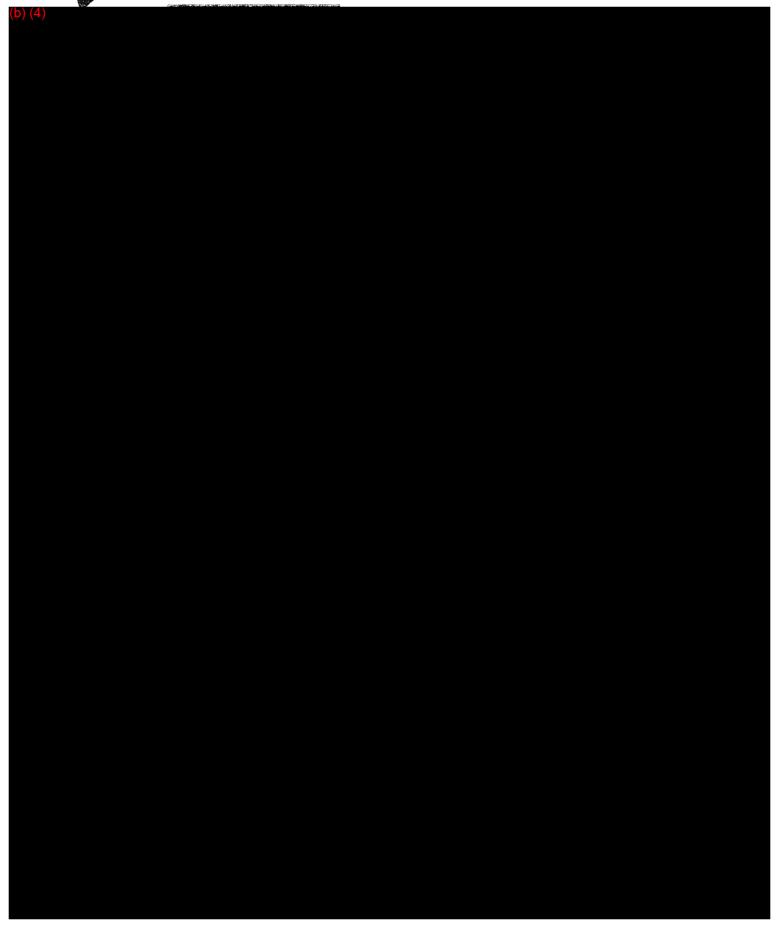


7.	Tests for Prod	uct Reco	<u>/ered/Recycled (</u>	if applical	<u>ble):</u>			
	4	See	special	teati	73			
3.	Management f	or Produ	ct Recovered/Re	cycled (if	applicable);			
	SPR	100	latment	and	handling	protocol	1	

One example

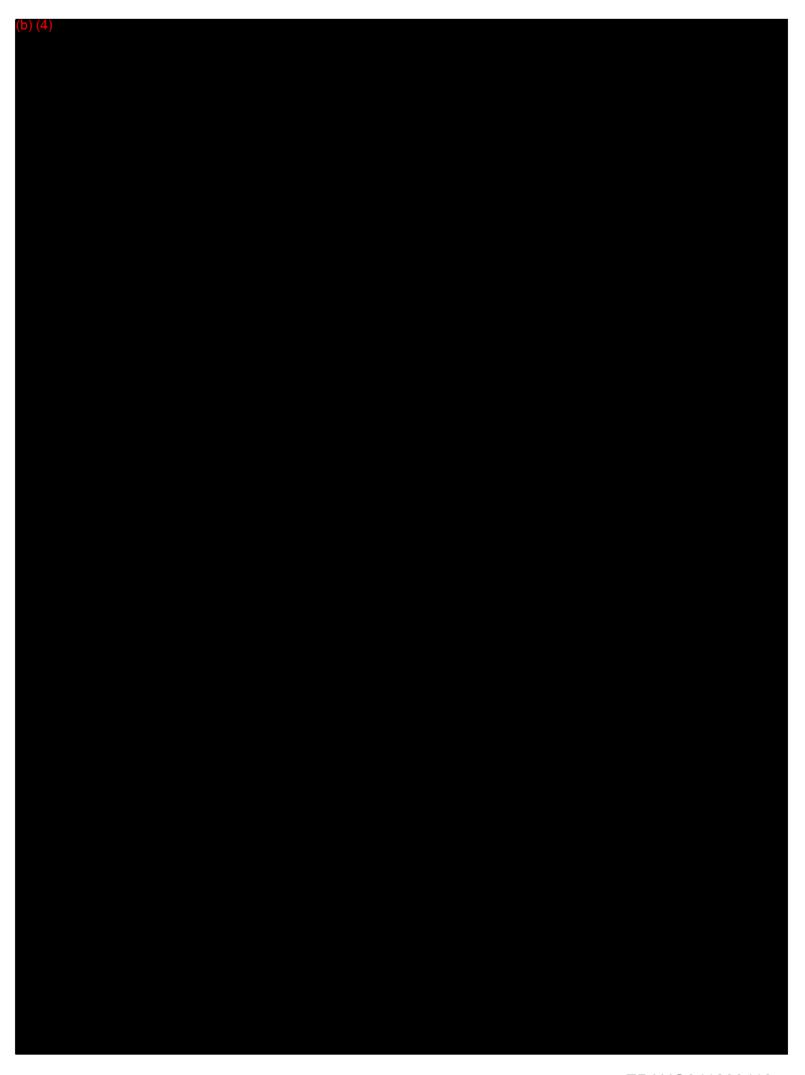


# **Material Safety Data Sheet**











* * * END OF MSDS * * *



# **Material / Product Approval Letter**

Date 9/9/2008

Ed Cox Dear

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 2982

Expiration Date 9/9/2010

**Producer:** Afton Chemical Corporation

Address:

Suget, IL 62201

Material / Product Information

Name of Material / Product Afton viscosity modifier w/flush oil

**Container Type:** 

**Detailed Description of Process Generating or Producing the Material / Product:** 

Afton viscosity modifier w/flush oil

Color: varies

**Odor:** varies

**pH:** 3-11

**Physical State:** 

Incompatibilities: strong oxidizers Safety Related Data/Special Handling:

std

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.



# CES Environmental Services, Inc.

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021

Fax: (713) 676-1676

JB

http://www.cesenvironmental.com

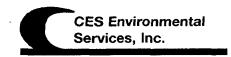
TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Material Producer Information
Company: Afton Chemical Corportation
Address: 501 Monsanto Avenue

Company:	Attori Chemicai Co	пропанон			
Address:	501 Monsanto Ave	nue			
City, State, Zip:	Suget, Il 66201				
Contact:	Ed Cox		Title:		
Phone No:	(618) 583-1078		Fax No:	(618) 583	3-1388
24/hr Phone:	(618) 583-1078		<del></del>		
U.S. EPA I.D. No:	na				
State I.D.	na		SIC Code:	na	
SECTION 2: Billin	g Information – 🔀 S	ame as Above			
Company:					
Address:					
City, State, Zip:				The second secon	
Contact:		Title:			
Phone No:		Fax No:			
		Tax No.			
CECTION 2. C.	ual Daganin dan - £41 :	Matarial / Desiderat			
SECTION 3: Gener	ral Description of the	e iviateriai / Product			
Name of Material /	Braduati A Cton	Viscosity Modi	Car W/ CI	انه مای	1
					C
Detailed Description	i of Process General	ng or Producing the Mat	eriai / Produci.		
Physical State:	☑ Liquid	☐ Sludge	☐ Powder		
rnysicai State:	<b>~</b>	<b>~</b>			
	☐ Solid	☐ Filter Cake	Combination	n	
144 0'40		1 ~ A.			
Color: Vario	C	Odor: Varin			
Specific Gravity (wa	nter=1): <u>\\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \</u>	Density: lbs/gal			
Does this material c	ontain any total pher	nolic compounds? 🔲 Yes	s 🔲 No		
Does this material c	ontain any para subs	tituted phenolic compour	nds? 🗌 Yes 🗌	No	
Layers:	X Single-phase	∐ Multi-phase			
Container Type:	□ Drum	☐ Tote [	Truck		Other (explain)
Container Size:	55 gal				
			<b>-</b>		
Frequency:	Weekly	Monthly [	<b>Quarterly</b>		Yearly
Number of Units (co	ontainers): <u>V(w</u> `	Other:	_		
Ç	·	0 1 +	_		
		Traduil			
Proper U.S. DOT SI	hipping Name:	Non RCRA Non DO	OT Regulated Mat	erial	
Class: na	UN/N	Λ· na	PG: na		RQ: na
Class: na	UIN/IN.	A: na	PG: na		RQ: na

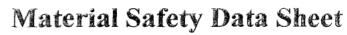
· · · · · · · · · · · · · · · · · · ·							
Flash Point	pH 3-11	N/A	N/A		So	lids %	
Oil&Grease	TOC	Zinc	Copper		Nickel		-
7 500_mg/l	NA mg/l	_ <u>//fr_</u> mg/l	/ <u>/</u>	ıg/l	NA mg/l		
SECTION 4: Physic	al and Chemical I	<u>Data</u>					
COMPONENTS TABLE					ncentration	Units	
The materia		ts of the following mater		——————————————————————————————————————	are acceptabl		
	(New	tral Oil w/ Vi	scosity Ma	itier)	100	3/5	
				!			
SECTION 5: Safety	Related Data						
		ct requires the use of sp	necial protecti	ve equinme	nt, nlease exnl	ain	
Standard	material / produ	ct requires the use of sp	ceiai protecti	ve equipme	mi, picase expi		
SECTION 6. Assoch	ad Commantina Da						
SECTION 6: Attach							
List all documents, no	otes, data, and/or m Shared	analysis attached to this	Form as part  MSDS	of the mate	erial / product	profile.	
SECTION 7: Incomp	<u>patibilities</u>						
Please list all incompa	atibilities (if any):						
Strong Oxidizers							
SECTION 8: Materi	al Producer's Cer	tification					
The information conta	ined herein is base	ed on [] generator knowl	ledge and/or D	analytical	data. I hereby	certify that the above	e an
attached description is	s complete and ac	curate to the best of my	knowledge a	nd ability to	o determine th	at no deliberate or w	villfu
		st and that all known or a lescribed by this documen		ards have be	een disclosed.	I certify that the mat	erial
tested are representativ	e of all materials of	leseribed by this documer	ιι.				
Authorized Signature	):			Da	te:		
Printed Name/Title:							
Trinted (value, Title)				····			
CES USE ONLY (DO NO	T WRITE IN THIS SE	PACE)					
Technical Manager:	-ebbide	TA					
Date: <u>G-Q-08</u>	(Ap	proved Rejected					
•		The same section of the sa					
Approval Number:	1927	<i>*</i>					
Tipprovarriamoer.	V106	:					

1.	Base Pricing (including freight):
	Pay \$0.15 FOB CES.
	No Payment No charge for backhauled loads by
	No Payment No charge for backhauled loads by CES. Pay \$ .019/pound
2.	Contamination Limits (maximum limit before surcharges apply):
	Very thick material. If operations management thinks this natural to so thick to emsume too many man hours then there may be no payment for material. If damaged drums are in own the ma payment for material. It damaged drums are in own
	packs + operations determines too many man house need thee willhe
	no payment.
3.	Surcharge Pricing:
4.	Special Testing Requirements:
	PVII retain sample. If thin enough in consistency, the
	in a il la bulked into CES best al.
	Hecord hay thick the nationalist Draw a necessing will help to get the Treatment and Handling Protocol: Treatment and Handling Protocol:
5.	Treatment and Handling Protocol: Notice of Scale Brum processing will died to get the
	Process as have oil according to product sales and
	operations manager determination. Haterial is very thicker operations. Have perhect sales and ups. manager both at sample.
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C

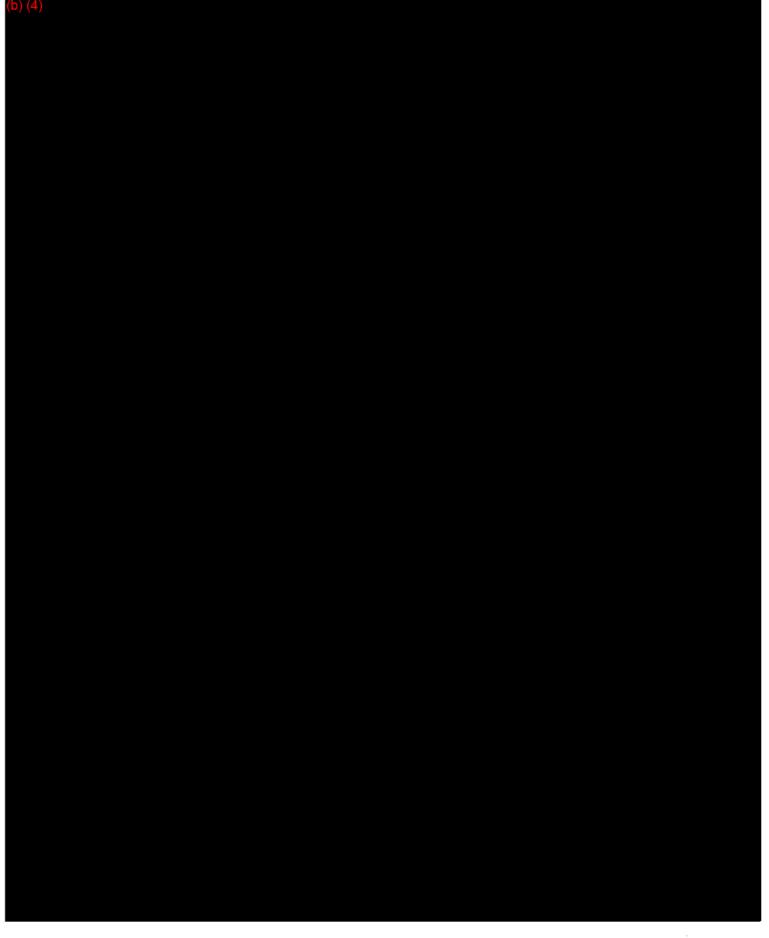


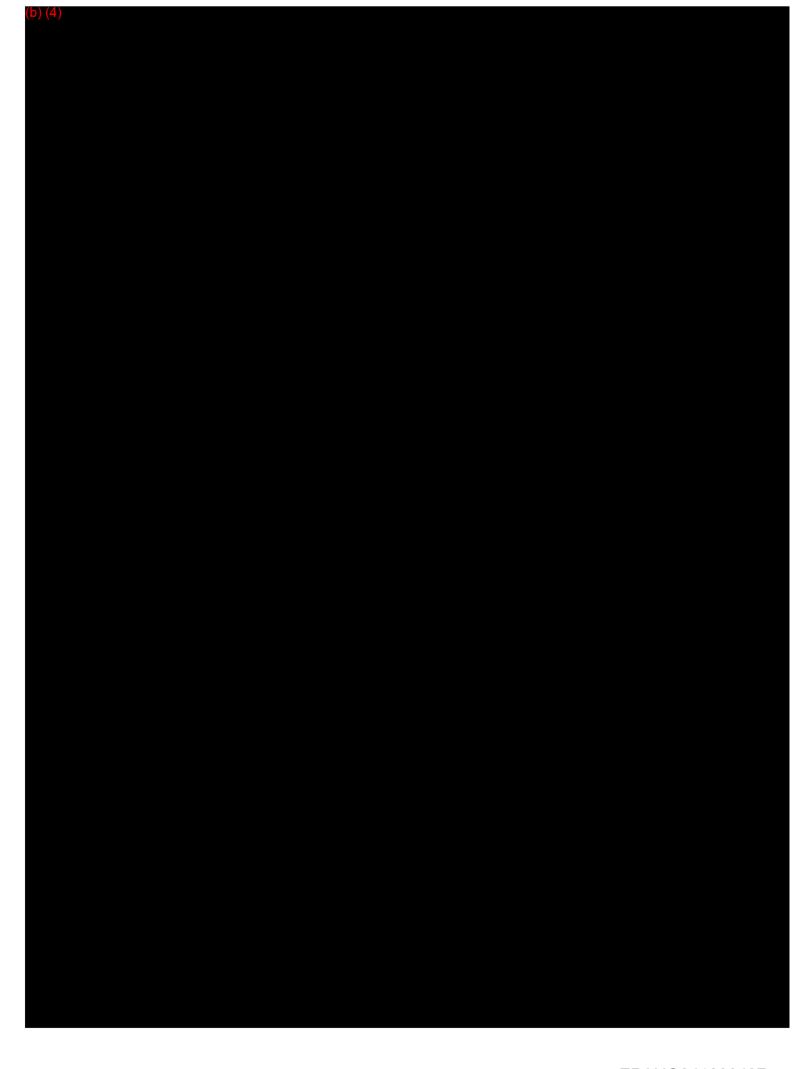
7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);

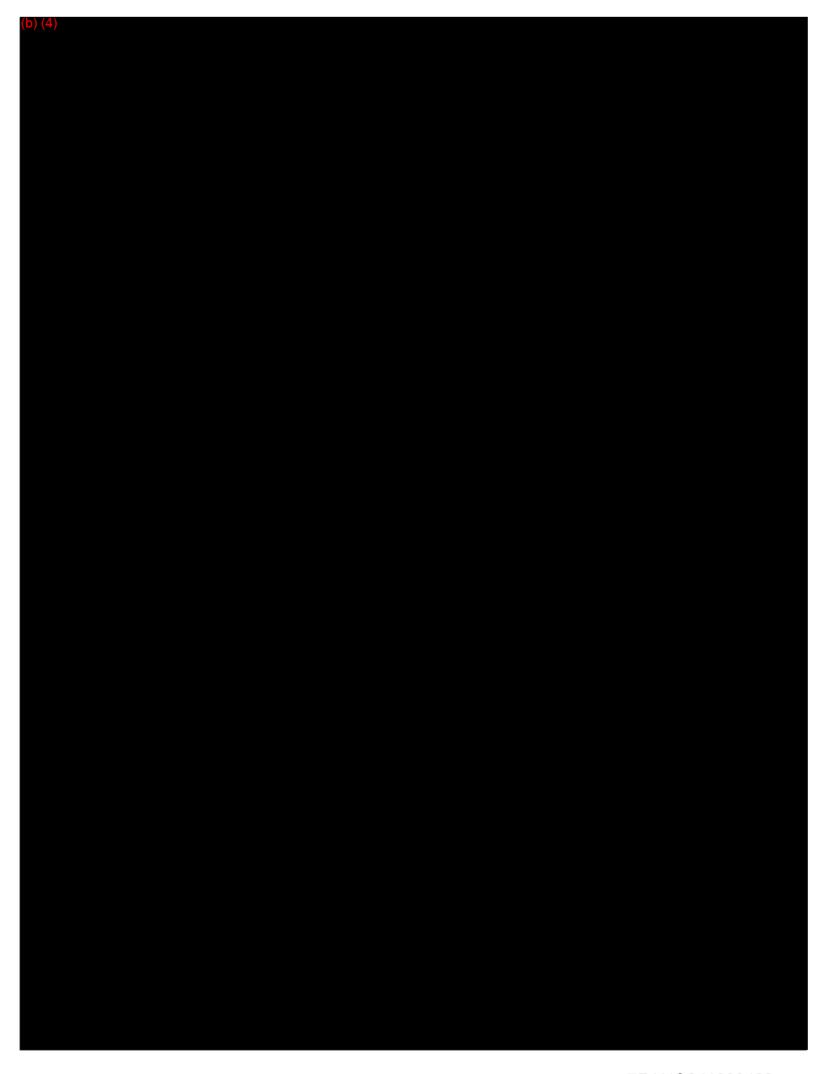
She example

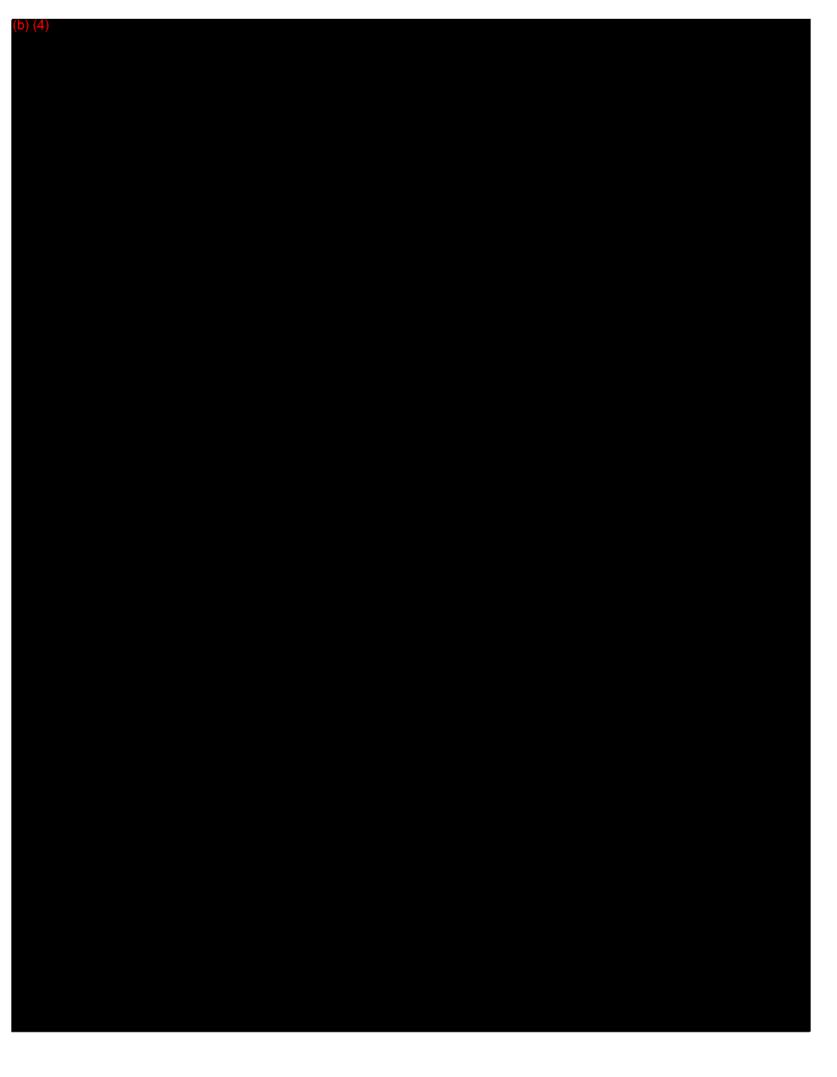






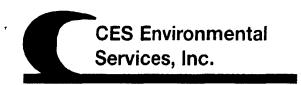








* * * END OF MSDS * * *



# **Material / Product Approval Letter**

Date 10/7/2008

Dear Ed Cox

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3022

**Expiration Date** 10/7/2010

**Producer:** Afton Chemical Corporation

Address:

Suget, IL 62201

Material / Product Information

Name of Material / Product Additives - Flammable, corrosive

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

Off-spec / out of date product

Color: brown

**Odor:** phenol like pH:  $\langle 2.5 \text{ or } \rangle 12.5$ 

**Physical State:** 

Incompatibilities: Strong oxidizers
Safety Related Data/Special Handling:

std

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. CES Environmental Services, Inc.

JB/AL

CES Environme	ntal Services – Houston Facility	☐ CES Environmental Services – Port Arthur Facility	
4904 Griggs Road, H		2420 S. Gulfway Drive, Port Arthur, TX 77641	
Phone: (713) 676-14		Phone: (713) 676-1460 Fax: (713) 676-1676	
	lid Waste Permit No: 30948	U.S. EPA ID No: TXR000079307 ISWR No: 88585	
U.S. EPA ID No: TX	D008950461 ISWR No: 30900		
SECTION 1: Mater	ial Producer Information		
Company:	Afton Chemical Corporation		
Address:	501 Monsanto Avenue		
City, State, Zip:	Suget, IL 62201		
Contact:	Edward Cox	Title:	
Phone No:	(618) 583-1078	Fax No: (618) 583-1078	
24/hr Phone:			
U.S. EPA I.D. No:			
State I.D.		SIC Code:	
CECTANA DELLA	· Information Some of Above		
Company:	: Information – 🔀 Same as Above		
Address:			
City, State, Zip:		we consider the second of the	
Contact:	Title:		
Phone No:	Fax No:		
SECTION 3: General	al Description of the Material / Product		
Name of Material / P	Product: Additives- Flammable, Corrosive		
	of Process Generating or Producing the Mater	rial / Product: off spec / out of date product	
Detailed Description	of freedom constituting of freedoms the Manual	Car I Value of the production	
	georgia prompt	<b>-1</b>	
Physical State:	∑ Liquid ☐ Sludge ☐	_ Powder	
	Solid Filter Cake	Combination	
Color: Bnown			
Specific Gravity (wat	ter=1): 105 Density: 2-9 lbs/gal		
Does this material co	ntain any total phenolic compounds?	⊠ No	
Description of the second of the	The state of the s	ds? 🗌 Yes 🛛 No	
Does this material co	ntain any para substituted phenolic compound	is:   ies   No	
Layers:	⊠ Single-phase ☐ Multi-phase		
Container Type:	□ Drum □ Tote □	Truck	
Container Size:	<u>55 gal</u>		
		/	
Emanuer	☐ Weekly ☐ Monthly ☑	Overstority - Versity	
Frequency:		Quarterly	
Number of Units (cor			
	Product		
Proper U.S. DOT Shipping Name: Flammable liquid, Corrosive, N.O.S. (alkaryl phosphate)			
Class: 3(8)	UN/NA: UN 2924	PG: PG III RQ: 1000 lbs	

Flash Point	pH	N/A	N/A	Solids
<u>&lt;140</u>	<2.5 or >12.5			0%
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>&gt;1500</u> mg/l	<1500mg/l	<u>O</u> mg/l	<u>0</u> mg/l	<u>O</u> mg/l

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE	Concentration	Units or %
The material / product consists of the following materials	Ranges are acceptable	
See MSDS - Hitec Additives	100	%

### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. Standard

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. See MSDS on shared drive: Customer MSDS: Afton

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any): Strong Oxidizers

### **SECTION 8: Material Producer's Certification**

The information contained herein is based on 🛛 generator knowledge and/or 🖾 analytical data. I hereby certify that the above and

attached description is complete and accurate to the best of my knowledge and abili- omissions of composition properties exist and that all known or suspected hazards have tested are representative of all materials described by this document.	
Authorized Signature: Son Balle  Printed Name/Title: Product. Answ. Pop for Generale	Date:/0/6/08
Printed Name/Title: Product. MIN. Japtor Generate	
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Date: Approved Rejected	
20.00	
Approval Number:	



# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

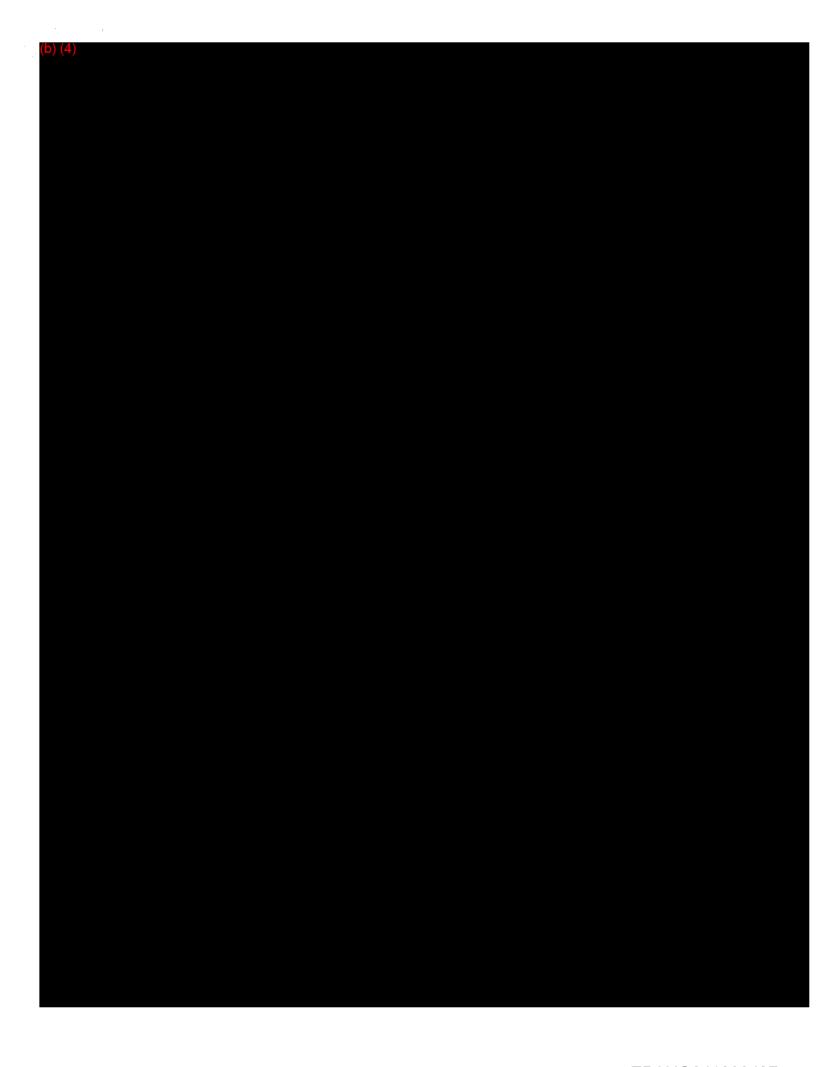
Base Pricing (including freight):
if brought by CES on back HALL - No charge no put. If brought in by
autside trans at customer expense pay 15 cents/ gal
Contamination Limits (maximum limit before surcharges apply):
If Drums Are Danged And Are in An overpack And operations determines too many MAI heres Are used to recover material their there will be no payment
Surcharge Pricing:
Special Testing Requirements:
Tecord quantity in each drum. Number each down and record Americal And product type on inventory List.
Treatment and Handling Protocol:
Once inventory has been given to product sales. the material will be resented AS is as directed by product sales person to established outlet
Treated Wastewater Discharge Subcategory:
Subcategory A Subcategory B Subcategory C



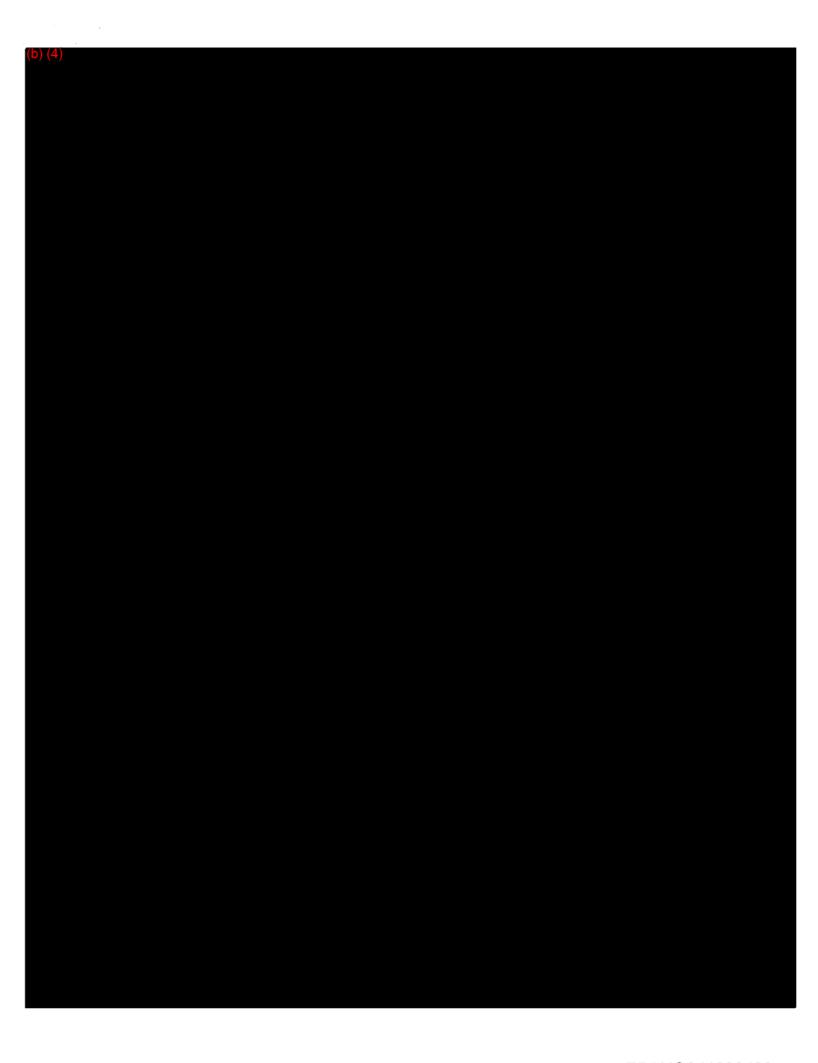
# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

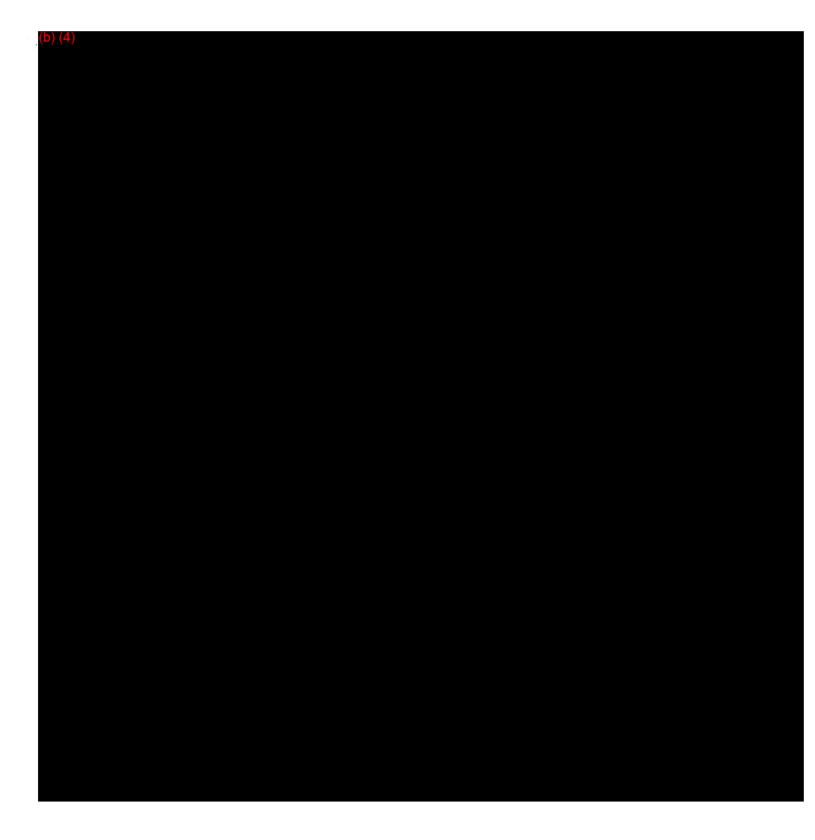
7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);



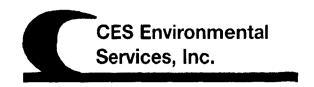








*** END OF MSDS ***



# **Material / Product Approval Letter**

Date 10/20/2008

Dear Edwin Anderson

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3033

Expiration Date 10/20/2010

**Producer:** Southwest Shipyard Address: 18310 Market Street

Channelview, TX 77530

Material / Product Information

Name of Material / Product Sulfuric acid

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

Unused sulfuric acid

Color: clear

Odor: none

**pH**: <2

**Physical State:** 

**Incompatibilities:** reacts violently with water, potassium perchlorate, KMnO4,

sodium, lithium, bases, organic material, halogens, metal acetylides, oxides and hybrides, metals (yields H2 gas), strong

oxidizing agents and many other reactive substances.

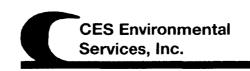
Safety Related Data/Special Handling:

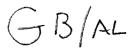
wear impervious protective cloting, including boots, gloves, coveralls and chemical safet glasses

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.





4904 Griggs Road, Phone: (713) 676-1 TCEQ Industrial S		76-1676 48	2420 S. Gulfwa Phone: (713) 6	onmental Services – Port Arthur Facility y Drive, Port Arthur, TX 77641 76-1460 Fax: (713) 676-1676 o: TXR000079307 ISWR No: 88585	
SECTION 1: Mate	rial Producer Information				
Company:	Southwest Shipyard				
Address:	18310 Market Street				
City, State, Zip:	Channelview, TX 77530				
Contact:	Edwin Anderson	WANT OF SOME LOCATION TO SEE THE SOURCE STATE OF SOME SOURCE STATE OF SOURCE S	Title:		
Phone No:	(281) 860-3200		Fax No:	(281) 860-3215	
24/hr Phone:	(281) 860-3200				
U.S. EPA I.D. No:	TXD000820274		<del></del>		
State I.D.	32108		SIC Code:		
			_		
SECTION 2: Billin	g Information – 🗌 Same a	s Above			
Company:	Southwest Shipyard	<u> </u>			
Address:	P.O. Box 24309		M	-	
City, State, Zip:	Houston, TX 77229-4309		Park Tark	La de la constante de la const	
Contact:	Edwin Anderson	Title:			
Phone No:	(281) 860-3200	Fax No:	(281) 860-321:	5	
•					
Name of Material /	SECTION 3: General Description of the Material / Product  Name of Material / Product: Sulfuric Acid  Detailed Description of Process Generating or Producing the Material / Product: Unused sulfuric acid				
Physical State:	⊠ Liquid □	Sludge	☐ Powder		
	☐ Solid ☐	Filter Cake	Combination		
	lead to the second		<b>_</b>		
Color: Clear	Odor: 1	none			
<del></del>	_				
Specific Gravity (w	ater=1): <u>1.4</u> Der	nsity: 9 lbs/gal			
Does this material o	ontain any total phenolic co	ompounds? 🗌 Yes	⊠ No		
Does this material c	ontain any para substituted	l phenolic compoun	ds? 🗌 Yes 🛛	] No	
Layers:	Single-phase	☐ Multi-phase			
Container Type:	Drum	Tote	Truck	Other (explain)	
Container Size:		1010	2 Huck	Other (explain)	
Container Size:			<del></del>	<del></del>	
Frequency:	☐ Weekly ☐	Monthly	<b>Quarterly</b>	☐ Yearly	
Number of Units (c		Other:	- "		
in the second of	<u>-</u>				
	<del></del>				
Proper U.S. DOT S	hipping Name:	Sulfuric acid (with n	ot more than 51%	acid)	
Class: 8	UN/NA:	UN2796	PG: II	RQ: 200 titers 1000	
				RQ: 200-inters 1000	

Flash Point	pН	N/A	N/A	Solids
<u>&gt;200</u>	<u>&lt;2</u>			0%
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>O</u> mg/l	<u>O</u> mg/I	<u>0</u> mg/l	<u>0</u> mg/l	<u>O</u> mg/l

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE  The material / product consists of the following materials	Concentration Ranges are acceptable	Units or %	
Sulfuric acid	30	%	
Water	70	%	
	Ì		

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. Wear impervious protective clothing, including boots, gloves, coveralls. Use chemical safety glasses.

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.

#### **SECTION 7: Incompatibilities**

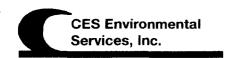
#### Please list all incompatibilities (if any):

Printed Name/Title: Ed Anderson

Reacts violently woth water, potassium percholrate, potassium permanagate, sodium, lithium, bases, organic material, halogens, metal acetylides, oxides and hydrides, metals (yields hydrogen gas), strong oxidizing agents and many other reactive substances.

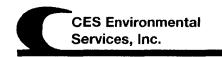
SECTION 8: Material Producer's Certification
The information contained herein is based on $\boxtimes$ generator knowledge and/or analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willfur omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.
Authorized Signature: ED Challeson Date: 10/20/2008

CES USE ONLY (DO NOT WRITE IN THIS SPACE)
Technical Manager: Lobulty A.
Date: 10-20-2008 Approved Rejected
Approval Number: 3033



## PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1.	Base Pricing (including freight):
	no charge
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
4.	Special Testing Requirements:
5 <b>.</b>	Treatment and Handling Protocol:
	Offload into totes
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



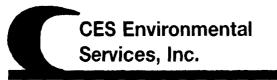
# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);

4904 Griggs Road Houston TX 77021

Tel. (713) 676-1460

Fax. (713) 676-1460



# **Material / Product Approval Letter**

Date 10/22/2008

Dear Steve Sams

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3035

Expiration Date 10/22/2010

**Producer:** Green Hunter Biofuels

**Address:** 13605 Industrial Blvd

Houston, TX 77015

Material / Product Information

Name of Material / Product 25% Caustic soda liquid (Product)

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

Tank containing 25% caustic soda liquid is damaged and leaking

Color: colorless Odor: none pH: 14

**Physical State:** 

Incompatibilities: acids, oxidizers
Safety Related Data/Special Handling:

ppe for caustic

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

# **CES Environmental** Services, Inc.

4904 Griggs Road Phone: (713) 676-1460

Houston, TX 77021 Fax: (713) 676-1676

/	TCEO	Industrial Solid Was		
	-	ID No: TXD0089504		No: 30900
	U.O. Et A	1210000/304		110. 30700
CECTION 1. Canal	atou Information			
SECTION 1: Gener	GREEN HUNTER BI	SELLET & DIC		
Company: Address:	13605 INDUSTRIAL			
		KUAD	<del> </del>	
City, State, Zip:	HOUSTON, TEXAS		Title:	AUTH, BROKER FOR GEN.
Contact:	STEVE SAMS		<del>-</del>	
Phone No:	713-530-4550		Fax No:	281-424-7748
24/hr Phone:	281-838-3400		-	
U.S. EPA I.D. No:	TXCESQG		- 010 0 1	N7/4
State I.D.	CESQG		SIC Code:	N/A
	Information - Sam			Thirtee nic
	PHOENIX POLLUTION		DNMENTAL SI	ERVICES, INC.
	720 S. LYNCHBURG R		<del></del>	
	BAYTOWN, TEXAS 77			
	STEVE SAMS	Title:		KER FOR GEN.
Phone No:	281-838-3400	Fax No:	281-424-7748	<u> </u>
<b>SECTION 3: Gener</b>	al Description of the W	<u>aste</u>		
	<u>% CAUSTIC SODA LIC</u>			
	of Process Generating	Waste: <u>TANK CONTA</u>	<u>AINING 25% C</u>	AUSTIC SODA LIQUID IS DAMAGED
AND LEAKING.				****
WSF	K21 **	٦., ٦	٦.,	
Physical State:	☐ Liquid ☐	Sludge	_ Powder	
	Solid [	Filter Cake	Combination	n
Color: <u>COLORI</u>	LESS Cde	r: <u>NONE</u>		
		9-10		
Specific Gravity (wa	ter=1): 1.11 - 1.53	Density: MA lbs/gal		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		• • • • • • • • • • • • • • • • • • •		
7 annimosas	Single-phase	☐ Multi-obase		
	M Substanting	La termination		
	[	7 157		
Container Type:	Down	] Tote		Other (cupizin)
Container Size:		<del></del>	130 BBL	-
Frequency:	□ Weekly □	Monthly [	Quarterly	⊠ Year∃v
•	<del>-</del>	•	•	E Succession
•	ntainers): 4,000 GALL	<u>ONS</u> OII	ner:	
Texas State Waste C	Code No:	Product		
Proper U.S. DOT Sh	ipping Name:	SODIUM HYDROX	DE. SOLUTIO	N
-				
Class: 8	UN/NA:	1824	PG: II	RQ:
	T == T == T		1.	
Flash Point	1 *	พotive Suifides	Reactive C	•
N/A		Amg/I	N/Amg/I	N/A%
Oil&Grease	TOC mg/l	Zine N/Ama/l	Copper N/Ama/I	Niekol N/Ama/l
mg/l	mg/l	N/Amg/l	N/Amg/I	N/Amg/I

The waste consists of the following materials  SODIUM HYDROXIDE (25%) 0.00 c.c. 100 %  SECTION 5: Safety Related Data  If the handling of this waste requires the use of special protective equipment, please explain.  PPE  SECTION 6: Attached Supporting Documents  List and decomposed analysis attached to this form as part of the waste appeared package.  SECTION 7: Incompatibilities  Please that all tenemand foliblishes (if earl):  Oxidity (100)  SECTION 8: Generator's Knowledge Documentation  Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:  TCLP Metals: X  TCLP Volatiles: X  TCLP Volatiles: X  Reactivity: X  Corrosivity: X  Ignitability: X  SECTION 9: Generator's Certification  The information contained herein is based on Senerator knowledge and ability to determine that no deliberate or will omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materi tested are representative of all materials described by this document.  Date: 10-21-of	<i></i>	COMPONENTS TABLE	Concentration	Units
SECTION 5: Safety Related Data  If the handling of this waste requires the use of special protective equipment, please explain.  PPE  SECTION 6: Attached Supporting Documents  List oil documents charts, data, and/or analysis attached to this form as part of the waste approval package.  SECTION 7: Incompatibilities  Please list oil incompatibilities  Please list oil incompatibilities  Please list oil incompatibilities  Please list oil incompatibilities  Please list oil incompatibilities  Please list oil incompatibilities  Please list oil incompatibilities  Please list oil incompatibilities  SECTION 8: Generator's Knowledge Documentation  Laboratory analysis of the hazardous waste characteristies, listed below, WAS NOT PERFORMED based upon the following generator knowledge:  TCLP Metals:  TCLP Metals:  X TCLP Semi-Volatiles:  X Reactivity:  X Reactivity:  X Lagnitability:  X Lagnitab			Ranges are acceptable	or %
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Additional Information:

5	SECTION 10: Waste Receipt Classification Under 40 CFR 437
J	s this material a wastewater or wastewater sludge?   YES NO
I	f 'Yes', complete this section.
1	PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.
<u>Me</u>	etals Subcategory: Subpart A
	Spent electroplating baths and/or sludges Metal finishing rinse water and sludges Chromate wastes Air pollution control blow down water and sludges Spent anodizing solutions Incineration wastewaters Waste liquid mercury Cyanide-containing wastes greater than 136 mg/l
	Waste acids and bases with or without metals Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations Vibratory deburring wastewater Alkaline and acid solutions used to clean metal parts or equipment
<u>Oil</u>	's Subcategory: Subpart B
	Used oils Oil-water emulsions or mixtures Lubricants Coolants Contaminated groundwater clean-up from petroleum sources Used petroleum products Oil spill clean-up Bilge water Rinse/wash waters from petroleum sources Interceptor wastes Off-specification fuels Underground storage remediation waste Tank clean-out from petroleum or oily sources Non-contact used glycols Aqueous and oil mixtures from parts cleaning operations Wastewater from oil bearing paint washes
<u>Ori</u>	ganics Subcategory: Subpart C
	Landfill leachate Contaminated groundwater clean-up from non-petroleum sources Solvent-bearing wastes Off-specification organic product Still bottoms Byproduct waste glycol Wastewater from paint washes
	Wastewater from adhesives and/or epoxies formulation Wastewater from organic chemical product operations Tank clean-out from organic, non-petroleum sources

<b>(1)</b>	If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.
(2)	If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.
	Cadmium: 0.2 mg/L
	Chromium: 8.9 mg/L
	Copper: 4.9 mg/L
	Nickel: 37.5 mg/L
(3)	If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.
	Metals Subcategory

### **SECTION 11: Additional Instructions**

Oils Subcategory

Organics Subcategory

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.



# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

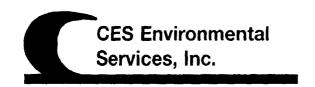
1.	
	trans only (if we do trans) 170/hrtfse
2.	Contamination Limits (maximum limit before surcharges apply):
	Must be clear product (>22% NaOH)
3.	Surcharge Pricing:
4.	Special Testing Requirements:
	(see Section 7)
5.	Treatment and Handling Protocol:
	See product section (8)
6.	Treated Wastewater Discharge Subcategory:
	Subcategory A Subcategory B Subcategory C

7. Tests for Product Recovered/Recycled (if applicable):

pH, concentration, color, clarity, s.g.

8. Management for Product Recovered/Recycled (if applicable);

Sand to CES Port Arthur facility for NaSH production



# **Material / Product Approval Letter**

Date 11/17/2008

Dear Troy Swearingen

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3065

Expiration Date 11/17/2010

**Producer:** MTI Environmental **Address:** 2150 Pansy Rd

Pasadena, TX 77503

Material / Product Information

Name of Material / Product sulfuric acid

**Container Type:** 

Detailed Description of Process Generating or Producing the Material / Product:

pH: 1

unused s8ulfuric acid

Color: brown Odor: acidic

**Physical State:** 

Incompatibilities: refer to msds

Safety Related Data/Special Handling:

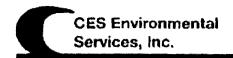
std + chemical suit and gloves

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. Sho

3003



JB/AL

CES Environmental Services - Houston Fa 4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 6 TCEQ Industrial Solid Waste Permit No: 309- U.S. EPA ID No: TXD008950461 ISWR No: 30			76-1676 18	24 Ph	20 S. Gulfway ione: (713) 676	Drive, Pe i-1460	Services – Port Arthur Facility ort Arthur, TX 77641 Fax: (713) 676-1676 0079307 ISWR No: 88585
SECTION 1: Materi Company: Address: City, State, Zip: Contact: Phone No: 24/hr Phone: U.S. EPA I.D. No: State I.D.	MTI Environmenta 2150 Pansy Road Pasadena, TX 7750 Trey Cherry (713) 947-1510 (713)201-3197 TXCESQG CESQG			I I	econs	713) 947 ka	-1 529
SECTION 2: Billing Company:	Information – 🗵 S	ame as	Above				
Address:		- Company of the Comp					
City, State, Zip:	A CONTRACTOR SERVICE S		Title:			aggina in	Description of the second seco
Phone No:			Fax No:		Source of the same		
SECTION 3: Gener	al Description of the	Mate	rial / Product				
Name of Material / P Detailed Description			Producing the Ma	terini	l/Product: <u>U</u>	<u>used S</u> ul	furie acid
Physical State:	⊠ Liquid □ Sofid		Sludge Filter Cake	4,-4.2	Powder Combination		
Color: bown	C	)dor: g	<u>eidíe</u>				
Specific Gravity (wa	ter=1): <u>1.84</u>	Dei	usity: <u>12</u> ibs/gal				
Does this material co	mtain any total pher	iolic co	ampounds? 🔲 Ye	es [	⊠ No		
Does this material co	outain any para subs	dituted	l phenolic compor	ınds?	□ Yes 🗵	No	
Layers:	Single-phase		☐ Multi-phase				
Container Type: Container Size:	<b>⊠ Drum</b> 55-gal		Tote		Truck		Other (explain)
Frequency; Number of Units (co	Weekly ontainers): 1	economic and	Monthly Other:	Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of the Constant of th	Quarterly	☒	Yearty
Proper U.S. DOT St	nipping Name:		Sulfuric Acid (with	nom	e than 51% acid	1)	
Class: 8 UN/NA:			UN1830	enzagi gi se in .	PG: II		RQ: 140 16 1000

Flash Point	pH	N/A	N/A	Solids
>140	1			<u>o</u> %
Oil&Grease	TOC	Zinc	Copper	Nickel
Omg/l	Qmg/l	Omg/I	Qmg/l	Qmg/I

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or Se
Sulfuric acid	90-100	C)
water	0-10	178

#### SECTION 5: Safety Related Data

If the handling of this material / product requires the use of special protective equipment, please explain. Standard plus chemical suite and gloves

### SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.  $\underline{MSDS}$ 

#### **SECTION 7: Incompatibilities**

### Please list all incompatibilities (if any):

Reacts violently woth water, potassium percholrate, potassium permanagate, sodium, lithium, bases, organic material, halogens, metal acctylides, oxides and hydrides, metals (yields hydrogen gas), strong oxidizing agents and many other reactive substances,

#### SECTION 8: Material Producer's Certification

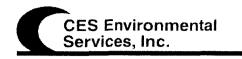
omissions of composition pi		nowledge and ability to determine that no deliberate or willful spected hazards have been disclosed. I certify that the materials
Authorized Signature:	Trylling	Dute: <u>11-03-2008</u>
Printed Name/Title:		
CES USE ONLY (DO NOT WRI	TE IN THIS SPACE)	

CES USE ONLY (DO NOT WRITE IN THIS SPACE)	The first control of a second control of a sec
Technical Manager: Feli Cur Thaye A	
Date: 17-08 Approved Rejected	
Approval Number: 3065	
Date: 1217-08 Approved Rejected	



# PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
\$125/ drum Trans \$75/hour + FSC
2. Contamination Limit (maximum limit before surchages apply):
3. Surcharge Pricing:
4 Special Testing Requirements:
4. Special Testing Requirements:  Oensity "lo 5ali d)
5. Treatment and Handling Protocol:
Use as product in processing
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



# PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

7. Tests for Product Recovered/Recycled (if applicable):	
8. Management for Product Recovered/Recycled (if applicable)	
Use as sulfuric acid feedstock for NaSH Production	

**MSDS** 

Material Safety Data Sheet

From: Mailinckrodt Baker, Inc. 222 Red School Lane Phillipsburg, NJ 08885





24 Hour Emergency Telephone: 908-859-2151 CHEMTREC: 1-800-424-9300

National Response in Canada CANUTEC: 613-995-6666

Outside U.S. and Canada Chemtres: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies associated a fault, tee, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

# SULFURIC ACID, 52 - 100 %

# 1. Product Identification

Synonyms: Oil of vitriol; Babcock acid; sulphuric acid

**CAS No.:** 7664-93-9 **Molecular Weight:** 98.08

Chemical Formula: H2SO4 in H2O

**Product Codes:** 

J.T. Baker: 5030, 5137, 5374, 5802, 5815, 5858, 5859, 5868, 5889, 5897, 5961, 5971, 5997, 6163, 6902, 9671, 9673, 9674, 9675, 9676, 9679, 9680, 9681, 9682, 9684, 9687, 9691,

9693, 9694

Mallinckrodt: 21201, 2468, 2876, 2878, 2900, 2904, 3780, 4222, 5524, 5557, H644, H850,

H976, H996, V651, XL003

# 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sulfuric Acid Water	7664-93-9 7732-18-5	52 - 100% 0 - 48%	Yes No

# 3. Hazards Identification

**Emergency Overview** 

POISON! DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED OR CONTACTED WITH SKIN. HARMFUL IF INHALED. AFFECTS TEETH. WATER REACTIVE. CANCER HAZARD. STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACID CAN CAUSE CANCER. Risk of cancer depends on duration and level of exposure.

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 4 - Extreme (Poison)

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 4 - Extreme (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD;

PROPER GLOVES

Storage Color Code: White (Corrosive)

# Potential Health Effects

#### Inhalation:

Inhalation produces damaging effects on the mucous membranes and upper respiratory tract. Symptoms may include irritation of the nose and throat, and labored breathing. May cause lung edema, a medical emergency.

#### Ingestion:

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea. Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow ingestion or skin contact. Circulatory shock is often the immediate cause of death.

### **Skin Contact:**

Corrosive. Symptoms of redness, pain, and severe burn can occur. Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow skin contact or ingestion. Circulatory shock is often the immediate cause of death.

### **Eye Contact:**

Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. Can cause blindness.

### **Chronic Exposure:**

Long-term exposure to mist or vapors may cause damage to teeth. Chronic exposure to mists containing sulfuric acid is a cancer hazard.

## **Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

## 4. First Aid Measures

#### Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

### Ingestion:

DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

#### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Excess acid on skin can be neutralized with a 2% solution of bicarbonate of soda. Call a physician immediately.

### **Eve Contact:**

Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

# 5. Fire Fighting Measures

#### Fire:

Concentrated material is a strong dehydrating agent. Reacts with organic materials and may cause ignition of finely divided materials on contact.

### **Explosion:**

Contact with most metals causes formation of flammable and explosive hydrogen gas.

#### Fire Extinguishing Media:

Dry chemical, foam or carbon dioxide. Do not use water on material. However, water spray may be used to keep fire exposed containers cool.

### **Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Structural firefighter's protective clothing is ineffective for fires involving this material. Stay away from sealed containers.

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

J. T. Baker NEUTRASORB® acid neutralizers are recommended for spills of this product.

# 7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out container and use it for other purposes. When diluting, always add the acid to water; never add water to the acid. When opening metal containers, use non-sparking tools because of the possibility of hydrogen gas being present. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

# 8. Exposure Controls/Personal Protection

## **Airborne Exposure Limits:**

For Sulfuric Acid:

- OSHA Permissible Exposure Limit (PEL) -
- 1 mg/m3 (TWA)
- ACGIH Threshold Limit Value (TLV) -
- 0.2 mg/m3(T) (TWA) for sulfuric acid A2 Suspected Human Carcinogen for sulfuric acid contained in strong inorganic mists.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation*, *A Manual of Recommended Practices*, most recent edition, for details.

## Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece respirator with an acid gas cartridge and particulate filter (NIOSH type N100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P particulate filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres. Where respirators are required, you must have a written program covering the basic requirements in the OSHA respirator standard. These include training, fit testing, medical approval, cleaning, maintenance, cartridge change schedules, etc. See 29CFR1910.134 for details.

### **Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### **Eve Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

# 9. Physical and Chemical Properties

#### Appearance:

Clear oily liquid.

#### Odor:

Odorless.

#### **Solubility:**

Miscible with water, liberates much heat.

### **Specific Gravity:**

1.84 (98%), 1.40 (50%), 1.07 (10%)

#### pH:

1 N solution (ca. 5% w/w) = 0.3; 0.1 N solution (ca. 0.5% w/w) = 1.2; 0.01 N solution (ca. 0.05% w/w) = 2.1.

### % Volatiles by volume @ 21C (70F):

No information found.

### **Boiling Point:**

ca. 290C (ca. 554F) (decomposes at 340C)

### **Melting Point:**

3C (100%), -32C (93%), -38C (78%), -64C (65%).

### Vapor Density (Air=1):

3.4

## Vapor Pressure (mm Hg):

1 @ 145.8C (295F)

### **Evaporation Rate (BuAc=1):**

No information found.

# 10. Stability and Reactivity

### Stability:

Stable under ordinary conditions of use and storage. Concentrated solutions react violently with water, spattering and liberating heat.

### **Hazardous Decomposition Products:**

Toxic fumes of oxides of sulfur when heated to decomposition. Will react with water or steam to produce toxic and corrosive fumes. Reacts with carbonates to generate carbon dioxide gas, and with cyanides and sulfides to form poisonous hydrogen cyanide and hydrogen sulfide respectively.

#### **Hazardous Polymerization:**

Will not occur.

#### **Incompatibilities:**

Water, potassium chlorate, potassium perchlorate, potassium permanganate, sodium, lithium, bases, organic material, halogens, metal acetylides, oxides and hydrides, metals (yields hydrogen gas), strong oxidizing and reducing agents and many other reactive substances.

#### **Conditions to Avoid:**

Heat, moisture, incompatibles.

# 11. Toxicological Information

#### **Toxicological Data:**

Oral rat LD50: 2140 mg/kg; inhalation rat LC50: 510 mg/m3/2H; standard Draize, eye rabbit, 250 ug (severe); investigated as a tumorigen, mutagen, reproductive effector.

#### Carcinogenicity:

Cancer Status: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

NTP Carcinogen				
Known	Anticipated	IARC Category		
No	No	None		
No	No	None		
	Known  No	Known Anticipated No No		

# 12. Ecological Information

#### **Environmental Fate:**

When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

### **Environmental Toxicity:**

LC50 Flounder 100 to 330 mg/l/48 hr aerated water/Conditions of bioassay not specified; LC50 Shrimp 80 to 90 mg/l/48 hr aerated water /Conditions of bioassay not specified; LC50 Prawn 42.5 ppm/48 hr salt water /Conditions of bioassay not specified. This material may be toxic to aquatic life.

# 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: SULFURIC ACID (WITH MORE THAN 51% ACID)

Hazard Class: 8 UN/NA: UN1830 Packing Group: II

Information reported for product/size: 440LB

**International (Water, I.M.O.)** 

**Proper Shipping Name:** SULFURIC ACID (WITH MORE THAN 51% ACID)

Hazard Class: 8 UN/NA: UN1830 Packing Group: II

Information reported for product/size: 440LB

# 15. Regulatory Information

\Chemical Inventory Status - Part Ingredient		TSCN	FC	Japan	Australia
Sulfuric Acid (7664-93-9) Water (7732-18-5)		Yes	Yes	Yes	Yes Yes
\Chemical Inventory Status - Part	2\			 anada	
Ingredient			a DSL	NDSL	Phil.
Sulfuric Acid (7664-93-9) Water (7732-18-5)		Yes	Yes	No No	Yes
\Federal, State & International ReIngredient	-SARA	302-		SAR	 A 313 mical Catg
Sulfuric Acid (7664-93-9)		1000	Yes	<b>-</b>	No
Water (7732-18-5)	No			) <b>\</b>	
			-RCRA-	- T	SCA-
Ingredient				8	
Sulfuric Acid (7664-93-9) Water (7732-18-5)	1000		No	N N	0
nemical Weapons Convention: No TSCA 12 ARA 311/312: Acute: Yes Chronic: Yes eactivity: Yes (Pure / Liquid)					

Australian Hazchem Code: 2P Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

# 16. Other Information

NFPA Ratings: Health: 3 Flammability: 0 Reactivity: 2 Other: Water reactive

### Label Hazard Warning:

POISON! DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED OR CONTACTED WITH SKIN. HARMFUL IF INHALED. AFFECTS TEETH. WATER REACTIVE. CANCER HAZARD. STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACID CAN CAUSE CANCER. Risk of cancer depends on duration and level of exposure.

#### **Label Precautions:**

Do not get in eyes, on skin, or on clothing.

Do not breathe mist.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Do not contact with water.

#### Label First Aid:

In all cases call a physician immediately. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before re-use. Excess acid on skin can be neutralized with a 2% bicarbonate of soda solution. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

#### **Product Use:**

Laboratory Reagent.

#### **Revision Information:**

No Changes.

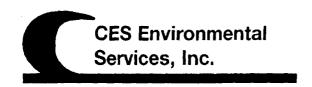
#### Disclaimer:

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Prepared by: Environmental Health & Safety

Phone Number: (314) 654-1600 (U.S.A.)

3 of 8



# Waste Pre-Acceptance/Approval Letter

Date 11/26/2008

Dear Linda Henson

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3093

Expiration Date 11/26/2010

**Generator:** Total Petrochemicals **Address:** 7600 32nd Street

Port Arthur, TX 77642-7901

Waste Information

Name of Waste: Spent naphthenic caustic

TCEO Waste Code #: Recycle

Container Type:

**Detailed Description of Process Generating Waste:** 

Treating of kerosene and jet fuel with caustic to remove sulfur compounds

Color: dark Odor: charactristic naphtheni pH: 10-14

**Physical State:** 

Incompatibilities: strong acids

Safety Related Data/Special Handling:

ppe for corrosive materials, glasses/goggles/face shield

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. Cannot approve at this line. Requires Dir. of Operations approval. DC/MM
we have tried this before, Cannot handle at CES Houston, there must be an outhof
for this material.

CES Environmental
Services, Inc.

, L	4904 Grigg Phone (713) 6	s Road, Houston 76-1460 Fax: (7	, TX 77021 13) 676-1460		PI	2420 S. Gulfv hone (713) 6	vay Dr., f 576-1460	Port Arthur, Fax: (713)	TX 77641 ) 676-1460	
	umber: TXD00		WR Number: 3		U.S. EPA IC	Number: T	KR00007	9307 IS	WR Numb	er: 88585
TCE	Q Industrial S	olid Waste Perm	t Number: 30	948	<u> </u>					
	Generator I									
Company: Address:	7600 32nd 5									
City:	Port Arthur	oueer		State:	TX	Zip:	7767	2-7901		
Contact:	Corbin Smit	h		Jiale.	Title:	— Environi				
Phone Num		409-963-6825		· · · · · · · · · · · · · · · · · · ·	Fax Number		nemai L	ilgilieci		
24/hr Phone		409-332-6495			, ax ivallibei	•				<del></del>
US EPA ID N			50991	i	-					
State ID No		20-	7	<i>w</i> 0	SIC Code:	291	i.			
State ID NO	•	<u>-x.c.</u>			Jic code.	-0/11	1			
SECTION 2:	Billing Infor	mation -	Same as A	Above						
Company:	Process Solu		,							
Address:		Houston Pkwy	Ste 100							
City:	Houston			State:	TX	Zip:				77032
Contact:	Kimberly M	cDonald			Title:					
Phone Num		832-300-5712			Fax Number	r:				
SECTION 3:	General Des	cription of the	Waste		-					
<u> </u>										
Name of Wa	aste:	Spent naphth	enic caustic							
<b>Detailed De</b>	scription of I	Process Genera	ting Waste:							
treating of k	erosene and	jet fuel with ca	ustic to rem	ove sulfur c	ompounds					
Physical Sta	te: 🗸	Liquid		Sludge		Powder				
		Solid		Filter Cake		] Combin	ation			
Color:	dark				Odor:	characte	eristic na	iphthenic a	acid	
				•						
Specific Gra	vity (water=	1):		1.05	_	Density	·	8-Jan lbs,	/gal	
Does this m	aterial conta	in any total ph	enolic comp	ounds?	√ You	es [	☐ No			
Does this m	aterial conta	in any para sul	ostituted pho	enolic comp	oounds?		Yes	☑ No		
Is the Waste	subject to 1	he benzene wa	iste operatio	n NESHAP	(40 CFR Part	t 61. Subna	rt FF)		] Yes	✓ No
		ite contains bei						following	_	
2812	2813						23	2824	2833	2834
2835							51	2861	2865	2869
2873							93	2896	2899	2911
3312										
Layers:	✓ Sin	gle-phase	☐ Mult	i-phase						
Container T	уре: 🗌	Drum 🗌	Tote 🔽	Truck [	Other (expl	ain)				
Frequency:										

		ous Waste" per opiete, sign and			Ye: dous Constitue		No iched hereto		
If "Yes", is	s it:	] D001 (ignitabi	e) []		•			□ D009	
Characterisi	IIC FOR TOXIC I	vietais:	☐ D004		☐ D006	) [_] D007	□ 0000	[] D003	
Characterist	tic for Toxic C	organics: D012			that apply)				
	<del></del>	d waste or mix it ALL applicab		?	☐ Yes	; <u> </u>	No		
40 CFR 261.	Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under  40 CFR 261.33(e) or (f)?								
Texas State	Waste Code	Number:		Recycle	Walance To Minamore White acco				
Proper US D	OT Shipping	Name:	Corrosive Li	quids, n.o.s.	(Naphthenic	austic acid			
Class:	Class: 8 UN/NA: 1760 PG: II RQ: 1000								
Flash	Point	pł	l	Reacti	ve Sulfides	Reactive	Cyanides	Soli	ds
N	/A	10-1	L4	N/A	mg/l	N/A	mg/l	0	%
Oil &	Grease	TO	С		Zinc	Co	per	Nic	kel
5-7%	mg/l	N/A	mg/l	N/A	mg/l	N/A	mg/l	N/A	<u>mg/l</u>

**SECTION 4:** Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or%
Sodium Hydroxide	2-20	%
Naphthenic acid salts	0-6	%
Petroleum distillates	0-1	%
Mixed cresylic acid salts	0-2	%
Water	Balance	%

If the handling	rety kelated Data  of this waste requires the use of special protective equip	ment, please explain.	
PPE for corrosiv	ve materials, glasses/goggles   Case Shield		
	1304-		
	tached Supporting Documents  nts, notes, data and/or analysis attached to this form as page.  MSDS	art of the waste	
SECTION 7: Inc Please list ALL in Strong Acids	compatibilities Incompatibilities (if any):		
Laboratory anal	enerator's Knowledge Documentation  Ilysis of the hazardous waste characteristics, listed below,  e following generator knowledge:	WAS NOT PERFORMED	
TCLP Metals:	×		
TCLP Volatiles:	X	· · · · · · · · · · · · · · · · · · ·	
TCLP Semi-Volat			
Reactivity:	X		744,000
Corrosivity:	X		
Ignitability:	X		
ignitatinity.	^		
<u>Facilities</u> )	ste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-T this material a wastewater or wastewater sludge?	reatment Requirements fo	r Centralized Waste Treatment  NO
	If Yes', complete this section.		
PLE	EASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CA	TEGORY, GO TO THE NEXT I	PAGE.
Me	gory: Subpart A ent electroplating baths and/or sludges etal finishing rinse water and sludges romate wastes r pollution control blow down water and sludges ent anodizing solutions cineration wastewaters aste liquid mercury anide-containing wastes greater than 136 mg/l aste acids and bases with or without metals eaning, rinsing, and surface preparation solutions from electro bratory deburring wastewater kaline and acid solutions used to clean metal parts or equipme		rations
Oils Subcategory	y: Subpart B		
<u></u>	ed oils		
	l-water emulsions or mixtures		
	bricants Iolants		
	ioiants Intaminated groundwater clean-up from petroleum sources		
	ed petroleum products		
	I spill clean-up		
	ge water		
	nse/wash waters from petroleum sources		

interceptor wastes
Off-specification fuels Underground storage remediation waste
Tank clean-out from petroleum or oily sources
Non-contact used glycols
Aqueous and oil mixtures from parts cleaning operations
Wastewater from oil bearing paint washes
Organics Subcategory: Subpart C  Landfill leachate
Contaminated groundwater clean-up from non-petroleum sources
Solvent-bearing wastes
☐ Off-specification organic product ☐ Still bottoms
Byproduct waste glycol
Wastewater from paint washes
☐ Wastewater from adhesives and/or epoxies formulation ☐ Wastewater from organic chemical product operations
Tank clean-out from organic, non-petroleum sources
(1)  If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.
(2)
if the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in
excess of the values listed below, the waste should be classified in the metals subcategory.
Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L Nicket: 37.5 mg/L
Hicker 57.5 mg/L
(3)  If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromlum, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.  Metals Subcategory Oils Subcategory Organics Subcategory
SECTION 10 Additional Instructions
If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.
SECTION 11: Generator's Certification
The information contained herein is based on generator knowledge and/or analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of
my knowledge and ability to determine that no deliberate or willful omissions of compostion
properties exist and that all known or suspected hazards have been disclosed. I certify that the
materials tested are representative of all materials described by this document.
Authorized Signature: Och 5.5 Date: 11/12/08
Printed Name/Title: LORBIN D. SMITH / ENVIRONMENTAL ADVISOR
CES USE ONLY (DO NOT, WRITE IN THIS SPACE)
(1) and
Compliance Officer: Compliance Officer:
Date: 11-26-02 Approved Rejected
Approval Number: 3093



1. Base Pricing (including freight):

## PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

Freight - \$0.07/gallon Management - \$0.41/gallon				
2. Contamination Limit (maximum limit before surchages apply):				
NA				
3. Surcharge Pricing:				
NA NA				
4. Special Testing Requirements:				
NA NA				
5. Treatment and Handling Protocol:				
Break emulsion by bringing pH to <2. Allow water to phase separate. Collect oil and sell as naphthenic acid.				
Water phase will be Category B water and dipsosed at CES or System 1.				
6. Treated Wastewater Discharge Subcategory:				
☐ Subcategory A ☑ Subcategory B ☐ Subcategory C				



## PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

7. Tests for Product Recovered/Recycled (if applicable):	
8. Management for Product Recovered/Recycled (if applicable)	
Sell oil phase as naphthenic acid.	



### TOTAL PETROCHEMICALS

OTAL PETROCHEMICALS USA, INC

# **Material Safety Data Sheet**

Section 1. Chemical Product and Company Identification					
Trade name	Spent Caustic	Code	004211		
Supplier	TOTAL PETROCHEMICALS USA, INC. P O Box 674411	MSDS# Validation Date	P100 10/15/2004		
Synonym	Houston,Tx. 77267-4411  Naphthenic Caustic	Print Date	10/15/2004		
MSDS Name	Spent Caustic	Responsible for Preparation	Paul Bradley		
Chemical Family	Mixture				
CAS Registry Number	64742-40-1	Emergency (800	mtrec: ) 424-9300 AL PETROCHEMICALS		
Threshold Limit Value	Sodium Hydroxide CEIL: 2 (mg/m³) from ACGIH (TLV) TWA: 2 (mg/m³) from OSHA	<b>USA</b> (800	INC: 322-3462 arthur: (409) 962-4421		
Manufacturer	TOTAL PETROCHEMICALS USA, INC. P.O. Box 849 Port Arthur, TX 77641-0849	Information	•		

Section 2. Composition and Information on Ingredients					
Name	CAS#	% by Weight	Exposure Limits		
Neutralizing agents, petroleum, spent sodium hydroxide	64742-40-1	100 %	Not established.		
Sodium Hydroxide	1310-73-2	< 20	CEIL: 2 (mg/m³) from ACGIH (TLV) TWA: 2 (mg/m³) from OSHA		
Cresylates		Varies	,		

Section 3. Hazards	dentification
Physical State and Appearance	Liquid.
Emergency Overview	CONTAINS MATERIAL WHICH MAY CAUSE DIGESTIVE SYSTEM, RESPIRATORY TRACT, SKIN, EYES DAMAGE. CAUSES SEVERE EYE BURNS.
Routes of Entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential Acute Health Effe	ects
Eyes	Extremely hazardous in case of eye contact (irritant). Corrosive to eyes on contact.
Skin	Very hazardous in case of skin contact (corrosive). Skin contact may produce burns or dermatitis.
Inhalation	Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation and/or pneumonia. Corrosive to the respiratory system.
Ingestion	May be fatal if swallowed. May cause burns to mouth, throat, stomach, nose, & eyes.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.
Medical Conditions Aggravated by Overexposure	Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.
Overexposure /Signs/Symptoms	Severe tissue damage at all points of contact.
See Toxicological Informati	on (Section 11)
Continued on Nex	ct Page

Spent Caustic	Page: 2/6
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Section 4. First	Section 4. First Aid Measures			
Eye Contact	Flush with large amounts of water. If redness persists, get medical attention.			
Skin Contact	If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.			
Inhalation	Allow the victim to rest in a well-ventilated area. Seek immediate medical attention.			
Ingestion	DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, fie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.			
Notes to Physician	Treat as alkali poisoning.			

Section 5. Fire Fighting Measures					
Flammability of the Product	Aquious components will not buen. However, lesser organic components may burn at high temperature.				
Auto-ignition Temperature	Not available.				
Flash Points	Not available.				
Flammable Limits	Not available.				
Products of Combustion	Not available.				
Fire Hazards in Presence of Various Substances	Not considered to be flammable according to our database.				
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not expected.  Risks of explosion of the product in presence of static discharge: Not expected.				
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder, CO2, and halon.  LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.				
Protective Clothing (Fire)	Wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear (Bunker gear).				
Special Remarks on Fire Hazards	No additional remark.				
Special Remarks on Explosion Hazards	No additional remark.				

Section 6. Accidental Release Measures			
Small Spill and Leak	Dilute with water and mop up, or absorb with an inert DRY material and place in an appropriate waste disposal container.		
Large Spill and Leak	Corrosive liquid. Contain spill and safely stop the flow. Warn personnel to move away. Eliminate all sources of ignition. Ventilate. Absorb with an inert material and put the spilled material in an appropriate waste disposal.		

## Continued on Next Page

Spent Caust	ic	•		Page: 3/6
L		 ······	 	······································

Section 7. Handling and Storage				
Handling	Keep away from incompatibles such as acids. Wear suitable protective clothing.			
Storage	Keep container dry. Keep in a cool place. Ground all equipment containing material. Corrosive materials should be stored in a separate safety storage cabinet or room.			

#### Section 8. Exposure Controls/Personal Protection

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of **Engineering Controls** vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Face shield. Splash goggles.

Body Full suit.

Respiratory

Use a MSHA/NIOSH approved respirator or equivalent at high concentrations.

Hands Chemical resistant gloves if contact is possible.

Feet Boots.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name Exposure Limits

Neutralizing agents, petroleum, spent sodium

hydroxide

Sodium Hydroxide

Not established.

CEIL: 2 (mg/m³) from ACGIH (TLV) TWA: 2 (mg/m³) from OSHA

Cresylates

Consult local authorities for acceptable exposure limits.

	cal and Chemical Properti	es		
Physical State and Appearance	Liquid.	Odor	Not available.	
Molecular Weight	Not applicable.	Taste	Not available.	
Molecular Formula	Not applicable.	Color	Not available.	
pH (1% Soln/Water)	10-14			
Boiling/Condensation Point	Not available.			
Melting/Freezing Point	Not available.			-1.
Critical Temperature	Not available.			
Specific Gravity	1.05 (Water = 1)			·· <del>·</del>
Vapor Pressure	Not available.			
Vapor Density	Not available.			
Volatility	Not available.			
Odor Threshold	Not available.		<u> </u>	* * * * * * * * * * * * * * * * * * * *
Evaporation Rate	Not available.			

Spent Caustic		Page: 4/6
VOC	Not available.	
Viscosity	Not available.	
LogKom	Not available.	
Ionicity (in Water)	Not available.	
Dispersion Properties	See solubility in water.	700
Solubility in Water	Soluble.	
Physical Chemical Comments	No additional remark.	

Section 10. Stability and Reactivity				
Stability and Reactivity	The product is stable.			
Conditions of Instability	No additional remark.			
Incompatibility with Various Substances	Extremely reactive or incompatible with strong acids.			
Hazardous Decomposition Products	carbon monoxide & carbon dioxide			
Hazardous Polymerization No.				

Section 11. Toxicological Information			
Toxicity to Animals	LD50: Not available. LC50: Not available.		
Chronic Effects on Humans	The substance is toxic to digestive system, upper respiratory tract, skin, eyes.		
Other Toxic Effects on Humans	Extremely hazardous in case of eye contact (irritant). Very hazardous in case of skin contact (corrosive).		
Special Remarks on Toxicity to Animals	No additional remark.		
Special Remarks on Chronic Effects on Humans	No additional remark.		
Special Remarks on Other Toxic Effects on Humans	No additional remark.		

Section 12. Ecolo	Section 12. Ecological Information					
Ecotoxicity	Not available.				<del></del>	
BOD5 and COD	Not available.					
Biodegradable/OECD	Not available.					
Mobility	Not available.				····	
	Not available.		**********			
Toxicity of the Products Biodegradation	of No information available.				***	,
Special Remarks on the Products of Biodegradation	No additional remark.					

## Continued on Next Page

Spent Caustic	Page: 5/6

Section 13. Disposal Considerations						
Waste Information	Recover free liquid. local regulations.	Transfer to a safe disposal area in accordance with federal, state, and				
Waste Stream	Recover free liquid. local regulations.	Transfer to a safe disposal area in accordance with federal, state, and				
Consult your local or re	gional authorities.					

port Information (for bulk shipments, non-bulk	shipments may differ)
DOT CLASS 8: Corrosive liquid.	
Caustic alkali liquids, n.o.s. (sodium hydroxide), 8, UN1719	, II RQ
UN1719	
Not available.	
Not listed in Appendix B of 49 CFR 172.101	$\otimes$
Sodium Hydroxide 1000 lbs	
See codes as shown in 49 CFR 172.101 Column 7.	
TDG CLASS 8: Corrosive liquid. TDG CLASS 9.2: Environmentally hazardous material.	
ADR CLASS 8: Corrosive liquid. Highly corrosive.	
IMDG CLASS 8: Corrosive liquid.	
IATA CLASS 8: Corrosive liquid.	
	DOT CLASS 8: Corrosive liquid.  Caustic alkali liquids, n.o.s. (sodium hydroxide), 8, UN1719 UN1719 II  Not available.  Not listed in Appendix B of 49 CFR 172.101  Sodium Hydroxide 1000 lbs  See codes as shown in 49 CFR 172.101 Column 7.  TDG CLASS 8: Corrosive liquid. TDG CLASS 9.2: Environmentally hazardous material.  ADR CLASS 8: Corrosive liquid. Highly corrosive.  IMDG CLASS 8: Corrosive liquid.

<u> </u>	
Section 15. Regul	atory Information
HCS Classification	HCS CLASS: Target organ effects. HCS CLASS: Corrosive liquid.
U.S. Federal Regulations	TSCA inventory: Yes SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: No products were found. SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
	Clean Water Act (CWA) 307: No products were found.
	Clean Water Act (CWA) 311: No products were found.
	Clean air act (CAA) 112 accidental release prevention: No products were found.  Clean air act (CAA) 112 regulated flammable substances: No products were found.  Clean air act (CAA) 112 regulated toxic substances: No products were found.
International Regulations WHMIS (Canada)	WHMIS CLASS E: Corrosive liquid.
	CEPA DSL: Spent Caustic
Continued on Nex	xt Page

Spent Caustic		Page: 6/6
EINECS	Not available.	
DSCL (EEC)	R35- Causes severe burns. R41- Risk of serious damage to eyes.	
International Lists	No products were found.	
State Regulations	New York acutely hazardous substances: sodium hydroxide Pennsylvania RTK: sodium hydroxide Florida: sodium hydroxide Minnesota: sodium hydroxide Massachusetts RTK: sodium hydroxide New Jersey: sodium hydroxide California prop. 65: No products were found.	

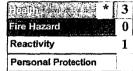
#### Section 16. Other Information

Label requirements CONTAINS MATERIAL WHICH MAY CAUSE DIGESTIVE SYSTEM, RESPIRATORY TRACT,

SKIN, EYES DAMAGE.

CAUSES SEVERE EYE BURNS.

Hazardous Material Information System (U.S.A.)



* 3 National Fire
0 Protection
Association
(U.S.A.)



References -HSDB - Hazardous Substances Data Bank

Other Special Considerations

No additional remark.

Validated by Paul Bradley on 10/15/2004.

Verified by Paul Bradley.

Printed 10/15/2004.

Chemtrec:

(800) 424-9300

TOTAL PETROCHEMICALS USA, INC:

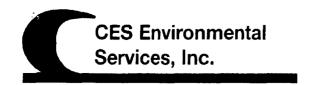
(800) 322-3462

#### Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

5

pH: >12.5



# **Material / Product Approval Letter**

Date 12/16/2008

Dear

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3115

Expiration Date 12/15/2010

**Producer:** Plymouth Extruded Shapes

**Address:** 201 Commerce Court

Hopkinville, KY 42445

### Material / Product Information

Name of Material / Product Sodium hydroxide solution alkaline cleaner

**Container Type:** 

Color: dark

**Physical State:** 

#### **Detailed Description of Process Generating or Producing the Material / Product:**

Odor: caustic

Cleaning for removal of draw lube from metal products

Creaming for removar of draw fube from metal products

Incompatibilities: oxidizers

Safety Related Data/Special Handling:

none

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc. Port Arthur there should be no oil

CES Environmental Services, Inc.

4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676

http://www.cesenvironmental.com

ISWR Number: 30900

TCEQ Industrial Solld Waste Permit Number: 30948

U.S. EPA ID Number: TXD008950461

48

(9 Scenvironmental-Port Attur 2420 Gulffway D-

SECTION 1: Generator	Information	- ان است	1 _ 1						
Company: Pyn	MYUM	EXT	udea	Shay	nes_				
Address:	001	COWN		<u> </u>	R+				
City: Hopk	inville,	<u> </u>	State:	<u>KY</u>	Zip		2445	.0	
Contact: /4	CENNY 2	augher-	<del>ry</del>	Title:		EH+5	Via Nag		
Phone Number:	2/0-	- 886-	663	Fax Nun	nper:	<u> 470 - 8</u>	85-7	034	
24/hr Phone Number:	<del>- 288</del>	8-141	-6425	EMA					
US EPA ID No: State ID No:	LYD	08421	10461	SIC Code					
State ID NO:				310 0001					
SECTION 2: Billing Info	rmation -	Same a	as Above						
Company:	EMA I	NC.							
Address: 106	27 1	MIDWE	57	INDUS	TKI	AL 13	ludi		
City: $S+$	LOUIS	5	State:	<u>MO</u>	Zip	: ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	3732		
Contact: Ma	RIA TU	ubarello	)	Title:		office	Mgs.		
Phone Number:	<u> 314-</u>	785 -6	425	Fax Nun	nber:	314-7	854 64	126	
SECTION 3: General De	escription of (	the Waste							
	<	- ,	11		<b>~</b> · ,	1	1/2 /	1	10
Name of Waste:	<u> </u>	odium	Hyl	eoxide	20/U	tion A	TRAIN	<u>e</u> 0	CANCR
Detailed Description of		erating wast	te:, y	$\sim$		1 0	- <del>- 4.</del>	<del>- / /</del>	
C/egNing		Remova	1 0/5	DKA	U Lu	be T	rom M	Cta!	
Products	<u> </u>		<u> </u>					<del></del>	
Physical State:	< Liquid Solid		Sludge			wder mbination			
Solom 7	a a v	_		04	_	0.44.	/.		
Color: $D/$	4BK	10 -		Odor:		CAUST	<u>عر</u>	<del></del>	· · · · · · · · · · · · · · · · · · ·
Specific Gravity (water	=1):	1/2 2	27		De	nsity: <u>9-2</u>	lbs/ga	al	
Does this material cont	ain any total	phenolic cor	mpounds?		Yes	⊠ No			
Does this material conf	ain any para	substituted	phenolic c	ompounds?		☐ Yes	☐ No		
is the Waste subject to		-		•	•	•		Yes	⊠ No
Answer "Yes" if your wa	aste contains	benzene ANI	D if the SIC	code from y	our facility	is one of the	e following:		•
2812 281	.3 28	316 28	119 2	821	2822	2823	2824	2833	2834
2835 283	86 28	341 28		843	2844	2851	2861	2865	2869
2873 287				891	2892	2893	2896	2899	2911
3312 495	3 49	959 95	511						
Layers: Sin	ngle-phase	□ M:	ulti-phase						
Container Type:	] Drum	☐ Tote	<b>Truck</b>	Other (e	explain)				
Frequency: Week	y 🗌 Month	nly X Year	iy 🗌 Or	e-Time					

	ous Waste" per 40CFR 261.: nplete, sign and date the Undo		Yes Yes			
Characteristic for Toxic I		□D011	□ D006	D003 (Reactive) D007 D008	□ D009	
	ed waste or mixed with one st ALL applicable codes:	?	Yes	<b>1</b> 00		
40 CFR 261.33(e) or (f)?	duct or spill cleanup that w \[ \] Y st ALL applicable codes:		"U" or "P" wa	ste code under		
Texas State Waste Code Proper US DOT Shipping	<	jan H.	H/recy.	de Jolution		
Class:	UN/NA: UN/824	PG: /		RQ:	-	
Flash Point	рН	Reactiv	ve Sulfides	Reactive Cyanides	Soli	ds
7200	712.5		> mg/l	mg/l	<u> </u>	%
Oil & Grease mg/l	TOC mg/l		Zinc  mg/l	Copper mg/l	Nickel mg/i	
	MPONENTS TABLE			CONCENTRATOIN		UNITS
	ists of the following materia	als		Ranges are acceptable		or %
Sodium Hyd	droxide		9 0	-20		
see Attache	ed analysis (n	50s)	7.0			
						·
	······································					
						<u> </u>
			1			

If the hand	lling of this wa		e use of special pr	otective equipm	ent, please e	explain.	
	uments, notes,		ments nalysis attached t			te	
	: Incompatibil ALL incompatik XI di 2475	ities oilities (if any):					
Laboratory	analysis of the	Knowledge Do hazardous wa generator kno	ste characteristic	s, listed below, V	VAS NOT PEE	RFORMED	
TCLP Metal	s:	X	<u> </u>				
TCLP Volati			***				
TCLP Semi-	Volatiles:	7					
Reactivity:							
Corrosivity:							
Ignitability:		<i></i>					
	Waste Receipt	Classification U	nder 40 CFR 437 (Pr	taining to Pre-Tre	eatment Regu	irements fo	or Centralized Waste Treatment
<u>Facilitles)</u>		l a wastewater omplete this sec	or wastewater slud tion.	ge?		☐ YES	⊠ NO
	PLEASE CHECI	THE APPROPR	IATE BOX. IF NO AI	PPROPRIATE CATE	GORY, GO TO	THE NEXT	PAGE.
Metais Subc	ategory : Subp	art A					
L	· · · · · · · · · · · · · · · · · · ·	plating baths an	d/or sludges				
	Metal finishin	g rinse water ar	d sludges				
	Chromate was						
<u> </u>	7		vn water and sludg	es			
<u> </u>	Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodizion   Spent anodiz	_					
	Waste liquid r	nercury					
	Cyanide-conta	ining wastes gr	eater than 136 mg/	1			
드			r without metals				
<u> </u>			preparation solution	ons from electrop	lating or phos	phating ope	erations
<b> </b>	•	urring wastewa	ter ed to clean metal p	arts or equipmen	+		
ـــ	, rancomic una a	cia 301440113 43	ed to clean metal p	arts or equipmen	•		
<u> Oils Subcate</u>	<u>aory</u> : Subpart	В					
	Used oils						
<u> </u>	J Oil-water emu Lubricants	ilsions or mixtui	res				
누	Coolants						
<u> </u>		groundwater c	lean-up from petro	leum sources			
	Used petroleu						
	Oil spill clean-	•					
	Bilge water						
	J Rinse/wash w	aters from petre	oleum sources				

Interceptor wastes
Off-specification fuels
Underground storage remediation waste
Tank clean-out from petroleum or oily sources
Non-contact used glycols
Aqueous and oil mixtures from parts cleaning operations
Wastewater from oil bearing paint washes
Organias Cubantanamus, Cubanut C
Organics Subcategory: Subpart C  Landfili leachate
Contaminated groundwater clean-up from non-petroleum sources
Solvent-bearing wastes
Off-specification organic product
Still bottoms
Byproduct waste glycol
☐ Wastewater from paint washes
Wastewater from adhesives and/or epoxies formulation
Wastewater from organic chemical product operations
Tank clean-out from organic, non-petroleum sources
(1)
If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.
(2)
If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in
excess of the values listed below, the waste should be classified in the metals subcategory.
Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L
Thoras 3715 the E
If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper or nickel above any of the values listed above, the waste should be classified in the organics subcategory.  Metals Subcategory  Oils Subcategory  Organics Subcategory
SECTION 10 Additional instructions
If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.
SECTION 11: Generator's Certification
The information contained herein is based on
I hereby certify that the above and attached description is complete and accurate to the best of
my knowledge and ability to determine that no deliberate or willful omissions of compostion
properties exist and that all known or suspected hazards have been disclosed. I certify that the
materials tested are representative of all materials described by this document.
How Made with the second
Authorized Signature: Date: 4/19/08/8
Printed Name/Title: Jim of Loft J Halle, IIP
CES USE ONLY (DO NOT WRITE IN THIS SPACE)
Compliance Officer: Policy Alamand
Date: 12-15-2008 Approved Rejected
Approval Number:
Approval Number.



## PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
\$ 0.45/gal + energy surcharse + compliance fee
2. Contamination Limit (maximum limit before surchages apply):
<1% solida, 0% 0il.
3. Surcharge Pricing:
4. Special Testing Requirements:
See Section 6
5. Treatment and Handling Protocol:
See section 7
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



### PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

Jest pH, % Normandration by Sit ration, To solids and Oil.

8. Management for Product Recovered/Recycled (if applicable)

de can't top layer into oil/water Separator tank at Port Streng. Bend caustic to caustic feel tank for NaSH production

McCoy && McCoy Laboratories, Inc. P. O. Box

Madisonville, KY www.mccoylabs.com

> Plymouth Extruded Shapes Attn: Greg Studer 201 Commerce Court Hopkinsville KY 42240

Lexington KY 859-299-7775 Madisonville KY 270-821-7375

Paducah KY 270-444-6547 Pikeville KY 606-432-3104

D.Wolfe@mccoylabs.com

Batch #: 06022333 Received: 02/28/2006 Reported: 03/13/2006

03/13/2006

Client:

PL8500 Page: 1 of 1

# **Analysis**

#### AE36041 Alkaline Collected: 2/28/2006

						Report	t
Test Description	Analyzed	₿y	Method	Result	Units		MCL Note
Extraction TCLP Filtration	03/02/2006	KET	EPA 1311	3/2/06			
Arsenic - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.028	mg/l	0.002	5.0
Barium -Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.432	mg/l	0.002	100.
Cadmium - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.002 U	mg/l	0.002	1.0
Chromium - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	2.36	mg/i	0.002	5.0
Lead - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.691	mg/l	0.002	5.0
Mercury- Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.0002 ป	mg/i	0.0002	0.2
Selenium - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.01	mg/l	0.002	1.0
Silver - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.002 U	mg/l	0.002	5.0

#### Submitted By:

Doug Wolfe, Director of Laboratory Services

The analyses reported above have been determined by protocols that meet or exceed the requirements of NELAC. Methods listed with an "*" are not part of this accreditation. Call Doug Wolfe at 270-821-7375 for any questions concerning this analysis report.

# MATERIAL SAFETY DATA SHEET

NO. 499

Revised: March 01, 2006

Product Name: USED, SODIUM HYDROXIDE, Hopkinsville, KY

**PLYMOUTH EXTRUDED SHAPES** 

201 Commerce Court Hopkinsville, KY 42240

USA

Emergency Phone: (270) 348-4830

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical Formula: Sodium hydroxide
Other Designations: Caustic soda (Caustic)
Product Use: Processing to resell caustic soda
Manufacturer: Plymouth Extruded Shapes, KY
USA Phones: Health & Safety: (270) 348-4830

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

		% by Weight		Exposure Li	imits (TWA in mg/m³)
Components	CAS No.		Form	ACGIH TLV	OSHA PEL
Sodium hydroxide	1310-73-2	10-20%	_		
Water		80-90%			·
Trace Metals					
Chromium Lead		2.36 mg/l 0.691 mg/l			
	İ	Ì			
			1		

cmpds = compounds

#### 3. HAZARDS INFORMATION

#### EMERGENCY OVERVIEW

Liquid, gray-white color. Odorless. Non-combustible. CORROSIVE.

Can cause severe irritation, corrosive burns, and permanent damage to eyes, skin, respiratory tract and gastrointestinal tract.

#### **Potential Health Effects**

EYES: Direct contact can cause severe irritation, corrosive burns, and permanent damage including blindness.

SKIN: Direct contact can cause severe irritation, burns and damage to skin.

INHALATION: Can cause respiratory tract irritation, lung damage and other health effects listed below. Cancer and reproductive hazard.

INGESTION: Can cause irritation and damage to the gastrointestinal tract if swallowed.

This material can cause corrosive burns to eyes or skin on contact due to its alkalinity. It is destructive to all contacted human tissue and gives severe burns. Eye contact will produce severe or permanent injury including blindness. Inhalation of mist or spray can cause irritation or injury to the upper respiratory tract. Chronic exposure to liquid mist can cause irritation or damage to the respiratory tract tissues.

**Sodium hydroxide** can cause severe irritation/corrosive burns to the eyes, skin, mucous membranes, and respiratory system.

Medical conditions aggravated by exposure to the product:

Asthma, chronic lung disease, and skin rashes.

#### *IARC CLASSIFICATIONS:

Group 1: The agent is carcinogenic to humans.

There is sufficient evidence that a causal relationship existed between exposure to the agent and human cancer.

Group 2B: The agent is possibly carcinogenic to humans.

Generally includes agents for which there is limited evidence in humans in the absence of sufficient evidence in experimental animals.

#### 4. FIRST AID MEASURES

EYES: Wash eyes <u>immediately</u> with plenty of running water for at least 15 minutes including under the eyelids and all surfaces. Speed in rinsing eyes after contact is extremely important if permanent injury is to be avoided. Obtain emergency medical care.

SKIN: Wash contact area promptly with large quantities of water. Remove contaminated clothing under the shower. Prolong washing in serious cases until medical help arrives, even for an hour or longer.

INGESTION: Do not give anything by mouth to an unconscious person. Immediately dilute chemical by drinking water or milk, up to 30 mL in children and 250 mL in adults. Do not neutralize with dilute vinegar, fruit juice or other acidic agents. Vomiting may occur spontaneously, but do not induce it. Contact a physician immediately.

INHALATION: Remove to fresh air. Check for clear airway, breathing, and presence of pulse. Provide CPR for persons without pulse or respirations. Consult a physician immediately.

#### 5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Sodium hydroxide solution is non-combustible. Sodium hydroxide will react vigorously with metals such as aluminum, tin, and zinc to generate flammable and explosive hydrogen gas.

EXTINGUISHING MEDIA: Use fire extinguishing agent suitable for surrounding fire. Use water spray to cool containers of this material which are involved in a fire situation. However, take care not to splash this caustic solution.

FIRE FIGHTING INSTRUCTIONS: Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

#### 6. ACCIDENTAL RELEASE MEASURES

SMALL/LARGE SPILL: Contact environmental control personnel. Plan ahead for handling spills. Personnel working on cleanup must use protective clothing/equipment to prevent body contact

with the liquid and be properly trained as required by OSHA regulations. Abundant running water should be available for emergency use. Pick up spill with vacuum equipment (alkali resistant) for disposal or flush to holding area with water. Neutralize residues with dilute acid and rinse with water.

#### 7. HANDLING AND STORAGE

HANDLING: Avoid handling conditions that may lead to spills or to mist formation. Do not permit workers to handle this material without proper training or without proper equipment. STORAGE: Store in well-sealed containers which are protected from physical damage. Have abundant running water available where stored, unloaded, or handled. Drains must have retention basin for pH adjustment and neutralization of spilled materials and flushings before discharge.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use with adequate ventilation to meet the limits listed in Section 2. RESPIRATORY PROTECTION: Use NIOSH-approved respiratory protection (mist respirator, high efficiency dust respirator for lead) as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 2.

SKIN PROTECTION: Wear chemical resistant gloves and other appropriate protective clothing to prevent skin contact.

EYE PROTECTION: Wear chemical splash goggles or face shield to prevent eye contact.

Sampling to establish lead level exposure is advised where exposure to airborne particulate or fumes is possible. Consult OSHA Lead Standard 29 CFR 1910.1025 for specific health/industrial hygiene precautions and requirements to follow when handling lead compounds

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Liquid (may contain precipitated inorganic salts); gray-white color

BOILING TEMPERATURE: 288-298°F (for 50% NaOH) FREEZE-MELT TEMPERATURE: Not determined

VAPOR PRESSURE: <1.0 mmHg EVAPORATION RATE: Not applicable

SPECIFIC GRAVITY: 1.2-1.3
DENSITY: See Specific Gravity
WATER SOLUBILITY: ~100%

PH: ≥ 12.5 ODOR: None

ODOR THRESHOLD (ppm): Not determined.

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not determined

#### 10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions in a sealed container. Do not store in magnesium, tin, chromium, aluminum, and zinc, and brass, bronze or galvanized containers.

REACTIVITY: This material will react with carbon dioxide in the air (when exposed) to form

EACTIVITY: This material will react with carbon dioxide in the air (when exposed) to form sodium carbonate. It will react violently with acids and with many organic chemicals, especially nitrocarbons and halocarbons. (Trichloroethylene will react with sodium hydroxide to form spontaneously flammable dichloroacetylene)

HAZARDOUS POLYMERIZATION: Will not occur.

#### 11. TOXICOLOGICAL INFORMATION

LD₅₀ or LC₅₀ for oral, dermal or inhalation routes of administration: No information found.

#### 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL/CHEMICAL FATE INFORMATION: No information found.

#### 13. DISPOSAL CONSIDERATION

Material may be neutralized on-site with necessary permits and precautions or off-site by a reputable waste treatment company.

RCRA Hazardous Waste No.: D002 due to the high ph

#### 14. TRANSPORT INFORMATION

U.S.A. DOT: Sodium Hydroxide Solution, 8, UN1824, II, RQ, Note: For packages less than 4,165 lb., delete "RQ" reference. Canadian TDG Hazard Class & PIN: 8, UN1824

#### 15. REGULATORY INFORMATION

#### U.S. Federal Regulations

TSCA STATUS: All components of this product are listed on the TSCA inventory.

CERCLA HAZARDOUS SUBSTANCES: Chromium, Sodium hydroxide.

SARA TITLE III

Section 311/312 Physical and Health Hazard Categories: Immediate (acute), Delayed

(chronic).

Section 313 Toxic Chemicals: Chromium

In reference to Title VI of the Clean Air Act of 1990, this material does not contain nor was it manufactured using ozone-depleting chemicals.

#### State Regulations

PENNSYLVANIA "Special Hazardous Substance"

#### International Regulations

CANADIAN DOMESTIC SUBSTANCES LIST: All components of this product are listed on the Canadian DSL.

EUROPEAN COMMUNITY: All components of this product are listed on ECOIN, the European Core Inventory.

JAPAN: All components of this product are listed on MITI, the Ministry of International Trade Industry.

AUSTRALIA: All components of this product are listed on the AICS inventory.

#### 16. OTHER INFORMATION

MSDS STATUS: New format.

MSDS System Number: 145285

PREPARED BY: Hazardous Materials Control Committee.

- <u>Guide to Occupational Exposure Values-1997</u>, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
- <u>Documentation of the Threshold Limit Values and Biological Exposure Indices</u>, Sixth Edition, 1991, Compiled by the American Conference of Governmental Industrial Hygienists, Inc. (ACGIH).
- NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, June 1994.
- <u>Dangerous Properties of Industrial Materials</u>, Sax, N. Irving, Van Nostrand Reinhold Co., Inc., 1984.
- Patty's Industrial Hygiene and Toxicology: Volume II: Toxicology, 4th ed., 1994, Patty, F. A.;
   edited by Clayton, G. D. and Clayton, F. E.: New York: John Wiley & Sons, Inc.

# INFORMATION HEREIN IS GIVEN IN GOOD FAITH AS AUTHORITATIVE AND VALID; HOWEVER, NO WARRANTY, EXPRESS OR IMPLIED, CAN BE MADE.

LEGEND:			
ACGIH	American Conference of Governmental Industrial Hygienists	atm	atmosphere
AICS	Australian Inventory of Chemical Substances	cm	centimeter
CAS	Chemical Abstract Services		gram
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	iu a, a,,,	inch
CFR	Code of Federal Regulations	kg	kilogram
CPR	Cardiopulmonary Resuscitation	lb	pound
DOT	Department of Transportation	m	meter
DSL	Domestic Substances List (Canada)	ma	milligram
ECOIN	European Core Inventory		milliliter
EPA	Environmental Protection Agency	mm	millimeter
IARC	International Agency for Research on Cancer	n.o.s.	
otherwise s		*******	
LC ₅₀	Lethal concentration (50 percent kili)	ppb	parts per
billion	, , ,	••	• ,
LCL	Lowest published lethal concentration	ppm	parts per
million		, ,	• ,
LD ₅₀	Lethal dose (50 percent kill)	psia	pounds per
square inch	absolute	·	
$LD_{Lo}$	Lowest published lethal dose	μ, ն	micron
NFPA	National Fire Protection Association	μ <b>g</b>	microgram
NIOSH	National Institute for Occupational Safety and Health		
NTP	National Toxicology Program		
OEL	Occupational Exposure Limit		
OSHA	Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
PIN	Product Identification Number		
RCRA	Resource Conservation and Recovery Act		
SARA	Superfund Amendments and Reauthorization Act		
STEL	Short Term Exposure Limit		
TCLP	Toxic Chemicals Leachate Program		
TDG	Transportation of Dangerous Goods		
TLV	Threshold Limit Value		
TSCA	Toxic Substances Control Act		
TWA	Time Weighted Average		

### SECTION 17

#### **DISCLOSURE STATEMENT**

The information presented in this Material Safety Data Sheet is subject to additions and revisions and is not all-inclusive, but represented as the best information available to date. This information was drawn from recognized sources believed to be reliable. However, Plymouth Extruded Shapes, and/or the preparer of this data sheet will not be responsible for damages of any kind resulting form the use of or reliance upon such information.

•					
	The product discussed is sold w	rithout warranty, expressed or in ation and testing to determine its	plied and upon condition	s that purchasers	
	shan perform metrown vermer	ation and testing to determine its	sunability for a particular	purpose.	
·					
	-				

CGS Energy Services LLC 10846 Hwy. 1 South Shreveport, La. 71115

Facility 318-797-0087 Fax 318-797-6688

## **Material Profile**

	Profile Number		
A. Generator Information			
Company_Plymouth Extruded Shapes	Phone (270) 886-6631		
Site Address _201 Commerce Court	Fax (270) 885-7034		
Hopkinsville, KY 42445			
Contact / TitleRandy Hubbard	Email		
EPA #_KYD084270461 State Gen	erating ID#SIC Code	SIC Code	
3. Billing Information			
3. Billing Information  CompanyEMA	Phone (314) 785-6425		
Mailing Address10627 Midwest Ind. Bivd			
St Louis, MO 63132			
Billing Contact _Maria Tumbarelio	Fax (314) 785-6426		
C. Transporter Information			
Company_TBD	EPA ID#		
	droxide Solution		
	1824Packing GroupII		
). General Waste Information			
Shipping Frequency: Number of Gallone 6000 Pr	er:   Month X Quarter   Year   One Time	Othe	
Shipping Method: Truck_x_ Rail	Barge		
Non-hazardous Hazardousx	Waste Codes _N/A		
Waste NameAlkaline Cleaner			
Process Generating WasteCleaning for reproducts.	moval of draw lube from metal		

GCS Energy Services LLC 10845 Hwy. 1 South Shreveport, La. 71115

Facility 315-797-9087 Fax 316-797-6686

E. REACTIVE	CHARACTERISTIC	8		***************************************
Oxidizer	Pyropheric	☐ Explosive	Redioactive	
Carcinogen	infectious	Shock Sansitive	☐ Water Reactive	
F. Physical Pre	perties			
ColorDark	Liquid % _10	0 Sladge %	Oil % Solida	. %
Specific Gravity	>1 Flash Po	dat_>140 pH_>	12.5BTUs_>25	00
-				
Single Phase	x or Multi Ph	rsex		
N. S NY	1 mil 1 m.	*** **		
Jaor: Nonc	Mild _x_ Stro	ng Describe		·····
<b>** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **</b>			4 A = 4 A = 4 A =	
Chemical Compositi	on (List all constituents (includit us) TOTAL COMPOSITION M	ng haiogenated organics, debris n ist polisi or pxcmpd ion	, and UHC's] present in any o	concentration and Bulbmit
Constituents	Concentration Ru			Concentration Range
Natar	80-90%	Setentura		<us< th=""></us<>
lodkum Hydroxide	10-20%	Silver		<.03
Vrsenic	<.05			
Sarkum	<.5		· · · · · · · · · · · · · · · · · · ·	
admium	<.01		<del></del>	
Chromium	<3.0			
asd	<1,0			
Mercury	<,001			
7 0 40 4		<del></del>		<del></del>
G. Certification				
all known or s submitted in c	Il information submittenspected hazards have onjunction with this decreased Signature	been disclosed. I furth	er certify that any and ive of the waste to be	llytical and/or samples shipped.
Printed Name	/ Title Randy Hut	BARC ENU. 1	R.A.	
i. ARKLA USE	ONLY Stat	us: Approved / Reje	eted	
Signature		Arkia Rep	resentative	
Signature		City of Sh	reveport Representati	ve



ERNIE FLETCHER GOVERNOR

#### **ENVIRONMENTAL AND PUBLIC PROTECTION CABINET**

LAJUANA S. WILCHER SECRETARY

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
HAZARDOUS WASTE BRANCH
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

April 21, 2006

Timothy J Hylla, Vice President Environmental Management Alternatives (EMA) 10627 Midwest Industrial Blvd. St. Louis, MO 63132

RE:

Regulatory Interpretation of Spent Sodium Hydroxide Solution as an Effective Substitute for a Commercial Chemical Product

Plymouth Extruded Shapes

Hopkinsville, Christian County, Kentucky

EPA ID #: KYD-084-270-461

AI: 787

Dear Mr. Hylla:

The Kentucky Division of Waste Management (Division) received your request for interpretation of 401 KAR 31:010 Section 2(5) for reuse and/or recycling of spent sodium hydroxide solution on April 8, 2006 and additional supportive information on April 19, 2006 as an effective commercial chemical product. A commercial chemical product is defined at 401 KAR 31:010 Section 2(5)(a)2 as "Materials are not waste when they can be shown to be recycled by being used or reused as effective substitute(s) for the commercial products."

The Division understands that the sodium hydroxide waste is generated by taking a carbon or stainless shape up to 3" wide and 20' long and pulling (cold drawing) it through a die to actually change the shape. A lubricant is used to lubricate the piece as it passes through the die. Once the draw is complete, the product is dipped into the sodium hydroxide for cleaning purposes. Plymouth Extruded Shapes annually generates around 4,000 gallons of the waste. Plymouth Extruded Shapes plans to sent the sodium hydroxide waste to Arkla Disposal Services (Wastewater Processing Plant) in Shreveport, LA where will be use as feedstock for the wastewater plant.

Based on the information provided, we agree that the sodium hydroxide can be used as effective substitute for the commercial product of sodium hydroxide and, therefore, this sodium hydroxide is not considered a waste when used as a commercial chemical product and is not subject to the hazardous waste regulations. We understand that the reuse process will take

Kentucky )

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Timothy J Hylla EMA / Plymouth Extruded Shapes April 21, 2006 Page 2 of 3

place in an agreement between Plymouth Extruded Shapes and Arkla Disposal Services which actually will reuse the sodium hydroxide material. Because the material is considered a product, no manifest will be required. However, the reuse of material is regulated and limited under the 401 KAR 31:010 Table 2 and 401 KAR 31:010 Section 2(3)(d).

If this material is accumulated on-site for too long, it becomes a solid waste pursuant to the speculative accumulation provisions. Specifically, the regulations state that a material is not accumulated speculatively if: 1) the material is potentially recyclable; 2) there are feasible means of recycling the material; and 3) 75% by weight or volume of the amount of the material accumulated at the beginning of the calendar year (January 1) is either recycled or transferred to a different site for recycling during the calendar year. If 75% of the material is not recycled in the specified time frame, the material becomes a solid waste on January 1 of the following year.

Therefore, based on above provisions and interpretations, Plymouth Extruded Shapes must be able to demonstrate that:

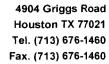
- The sodium hydroxide is being used as cited above, and not merely capable of such use. (We suggest keeping documentation to support the claim that the sodium hydroxide is being used in a manner that is within the scope of this exclusion).
- 75% of the sodium hydroxide is being recycled under the one-year calendar provisions.

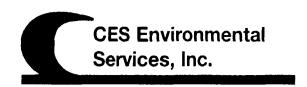
The approval determination of this Division stands as long as:

- The process is handled as proposed, in accordance with 401 KAR 31:010 Section 2(5)(a)2 for the material being recycled/reused as a commercial product.
- The sodium hydroxide is on-specification according to the Arkla Disposal Services requirements for the recycling process.
- It is used as an ingredient without prior treatment or reciamation process.

Plymouth Extruded Shapes should be aware that the event of the discontinuation of the recycling/reuse program agreement with Arkla Disposal Services or any similar program and/or off-specification, the sodium hydroxide will be considered a hazardous waste and therefore must be managed in accordance with RCRA regulations.

Also it will be required that a modification of Plymouth Extruded Shapes' hazardous waste activities registration form be made to remove sodium hydroxide as a waste stream.





# **Material / Product Approval Letter**

Date 12/17/2008

Dear Corey Green

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3117

Expiration Date 12/17/2010

**Producer:** Valero Refining Co Texas

**Address:** 9701 Manchester

Houston, TX 77012-2408

Material / Product Information

Name of Material / Product Sulfidic caustic

**Container Type:** 

**Detailed Description of Process Generating or Producing the Material / Product:** 

Gas scrubber

Color: brown

Odor: sulfide

pH:

**Physical State:** 

Incompatibilities: acids, oxidizers

Safety Related Data/Special Handling:

level c

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



PAGE 02

CES Environmental Services – Houston Fact 4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 67 TCEQ Industrial Solid Waste Permit No: 3094 U.S. EPA ID No: TXD008950461 ISWR No: 309			76	<ul> <li>✓ CES Environmental Services – Port Arthur Facility</li> <li>2420 S. Gulfway Drive, Port Arthur, TX 77641</li> <li>Phone: (713) 676-1460 Fax: (713) 676-1676</li> <li>U.S. EPA ID No: TXR000079307 ISWR No: 88585</li> </ul>			
SECTION 1: Mad	erial Producer Infor	mation	_				
Сотряпу:	Valero Houston R						
Address:	9701 Manchester					rt	
City, State, Zip:	Houston, TX 77012-2408						
Contact:	Cory Green					ental Engineer	
Phone No:	713-923-3378			Fax No:	713-923-2	3561	
24/hr Phone:	CES: 713-676-1460						
U.S. EPA I.D. No:		<u> </u>					
State I.D.				SIC Code:	~~~		
	ng Information – 🗔						
Company:	Evergreen Disposal P.O. Box 58198	Solutions Inc.					
Address:	Webster, TX 77598	0100					
City, State, Zip: Contact:	Craig Byard	-0170	Title:	President			
Phone No:	281-910-0877		Fax No:	- (Caldone			
• • • • • • • • • • • • • • • • • • • •			<b></b>				
SECTION 3: Gene	eral Description of th	e Material / I	Product				
	Product: Sulfidic Con of Process Genera  Liquid	ting or Produ	c	terial / Product Powder Combinat		er	
Color: <u>Brown</u>	☐ Solid	Filter Odor: Sulfide		Combinat	aon		
Specific Gravity (w	vater=1): <u>1.025</u>	Density:	9-10 lbs/gal				
Does this material	contain any total pho	enolic compot	ınds? 🔲 Ye	s 🛭 No			
Does this material	contain any para sul	stituted phen	olic compou	nds? 🗌 Yes	⊠ No		
Layers:	Single-phase		Multi-phase				
Container Type: Container Size:	Drum	Tote		⊠ Truck <u>5000 g</u>		Other (explain	)
Frequency: Number of Units (c	Weckly wontainers): 70	□ Mon Oth	•	Quarter	ly 🛛	Vearly	
Proper U.S. DOT S	Shipping Name:	RQ, C	,	ids, n.o.s. (sodi	ım hydroxide)	, 8, UN 1760, PO	-II (Sulfidic
Class: 8	UN/R			PG:	PG-II	RQ:	100 €
			,				

281--480-7357

Flash Point	pН	N/A	N/A	Solids
>140	12.5-14.0			<u>&lt;2</u> %
Oil&Grease	TOC	Zinc	Соррег	Nicket
<1.0mg/l	>1500mg/l	<u>O</u> mg/i	Qmg/I	<u>0</u> mg/l

#### SECTION 4: Physical and Chemical Data

The material / product consists of the following materials	Concentration  Ranges are acceptable	Units or %
Sodium Hydroxide	1-20	%
Sulfide	0.10-3.00	%
Oil and residual hydrocarbons	0-1	%
Dirt	0-2	%
Water	80-99	%

#### SECTION 5: Safety Related Data

If the handling of this material / product requires the use of special protective equipment, please explain. Level C

#### SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. CES Analysis

#### **SECTION 7: Incompatibilities**

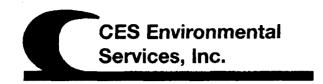
Authorized Signature:

Please list all incompatibilities (if any): acids, oxidizers

#### SECTION 8: Material Producer's Certification

The information contained herein is based on \( \simeg \) generator knowledge and/or \( \simeg \) analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all majerials described by this document. Date: 12-17-2008

,	
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Technical Manager: Pollwell The	
Date: 12-17-08 Approved Rejected	
Approval Number: 3117	



4904 Griggs Road Houston, TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1676

To: Gary Brauckman

Date: 06/19/08

Cc: Keli Lofton, Gary Peterson, Prabhaker

From: Miles Root

Lab Memo: 08-110

Subject: Valero Evaluation 0608-43

A sample of sulfidic caustic from Valero, Houston has been evaluated for processing at CES. This sample is evaluation 0608-43. Overall, this is a very weak sulfidic caustic that may be processed at CES to recovery the small amount of sulfides.

A composite of a top, middle and bottom sample was prepared and analyzed. This sample is a very weak caustic with corresponding weak sulfide content, and no mercaptan sulfur. Our potential treatment would consist of acidification to recovery the hydrogen sulfide. This would be run in our SIB tank system. Since we will produce very little hydrogen sulfide from this stream for the work involved we need to make sure we are covering our costs for disposal. The table below summarizes the analytical work.

Valero Eval 0608-4	3
Specific Gravity	1.025
NaOH, wt%	1.2
Sulfide, as S, wt%	0.15
RSH, as S, wt%	0

used as feed for wast

### **Gary Brauckman**

From:

Miles Root

Sent:

Monday, June 23, 2008 10:56 AM

To:

Gary Brauckman

Subject:

Valéro pH

Valero composite pH on evaluation 0608-43 is 12.5.

Miles Root **Laboratory Research and Development Specialist** CES Environmental Services, Inc. 4904 Griggs Road Houston, TX 77021

Cell: 832-607-6678 Fax: 713-748-8664

# **Gary Brauckman**

From:

Miles Root

Sent:

Wednesday, June 18, 2008 2:42 PM

To:

Gary Brauckman

Subject:

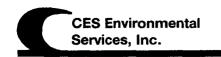
Valero

SG = 1.025 NaOH, wt% = 1.2 Sulfides, as S, wt% = 0.15 RSH, wt% = 0

This is a very weak sulfidic caustic stream.

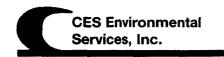
Miles Root Laboratory Research and Development Specialist CES Environmental Services, Inc. 4904 Griggs Road Houston, TX 77021

Cell: 832-607-6678 Fax: 713-748-8664



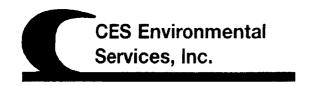
# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

ı.	Base Pricing (including freight):
	40 cents per gallon Trans \$70.00 per hour plus Fuel Surcharge
2.	Contamination Limits (maximum limit before surcharges apply):
	none
3.	Surcharge Pricing:
	none
4.	Special Testing Requirements:
	Sulfidic Caustic Evaluation
_	Threatenant and Hamilton Durate call.
5.	Treatment and Handling Protocol:
	Process through Reactor Vessel for the recovery of sulfur compounds in the production of NasH
	feedstock for NaSH
	·
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A Subcategory B ☐ Subcategory C



# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

	NA
_	7.5
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable);  NasH
8.	
8.	
8.	
8.	



# **Material / Product Approval Letter**

Date 12/29/2008

Dear Monica Soileau

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3126

Expiration Date 12/29/2010

**Producer:** Conoco Phillips (Westlake LA)

**Address:** 2200 Old Spanish Trail

Westlake, LA 70669

Material / Product Information

Name of Material / Product Spent sulfuric acid

**Container Type:** 

#### **Detailed Description of Process Generating or Producing the Material / Product:**

Off-spec material from manufacturing process

or spee massing nom manageraring process

Color: dark red Odor: slight pungent pH: 0-1

**Physical State:** 

**Incompatibilities:** Metals, oxidizing agents **Safety Related Data/Special Handling:** 

Chemical suit, rubber gloves, rubber boots, safety goggles, face shield, hard hat

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



4904 Griggs Road, F Phone: (713) 676-14 TCEQ Industrial So		676-1676 0948	2420 S. Gulfwa Phone: (713) 6	y Drive, F 76-1460	Services – Port Arthur Facility Port Arthur, TX 77641 Fax: (713) 676-1676 0079307 ISWR No: 88585
SECTION 1: Mater	ial Producer Informatio	n			
Company:	ConocoPhillips	<u>11</u>			
Address:	2200 Old Spanish Trail				
City, State, Zip:	Westlake, LA 70669				
Contact:	Cheryl Manuel		Title:		
Phone No:	337-491-5188		Fax No:		
24/hr Phone:	337-491-5188				
U.S. EPA I.D. No:	NA			214	
State I.D.	NA		SIC Code:	NA	
SECTION 2: Billing Company: Address: City, State, Zip:	z Information – 🛚 Same	as Above	- dadistro		
Contact:		Title:			
Phone No:		Fax No:		~~~	
	Product: Spent Sufluric A of Process Generating of Liquid		Description of the latest description of the		aterial from manufacturing process
Color: Dark 12		: Slight Pungent			
Specific Gravity (was	ter=1): <u>1.84</u>	Density: 15 lbs/gal			
	ntain any total phenolic	-			
Does this material co	ntain any para substitut	ed phenolic compou	ınds? 🗌 Yes 🛛 🗵	] No	
Layers:	⊠ Single-phase	Multi-phase			
Container Type: Container Size:	Drum	Tote	⊠ Truck 4500		Other (explain)
Frequency: Number of Units (co	$\boxtimes$ Weekly $\square$ ntainers): $2$	Other:	☐ Quarterly		Yearly
Proper U.S. DOT Sh			Spent, 8, UN1832,	PG II	
Class: 8	UN/NA:	UN1832	PG: PG	П	<b>RQ:</b> 1000

Flash Point	рH	N/A	N/A	Solids
<u>&gt;150</u>	<u>0-1</u>			0%
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>NA</u> mg/l	<u>NA</u> mg/l	<u>NA</u> mg/I	<u>NA</u> mg/l	NAmg/I

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Sulfuric Acid	90-92	%
Water	8-10	%
		<del>-</del>

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. Chemical Suit, Rubber Gloves, Rubber Boots, Safety Goggles, Face Shield, Hard Hat

#### **SECTION 6: Attached Supporting Documents**

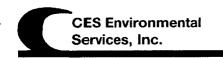
List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. **MSDS** 

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any):

Metals, Oxidizing Agents

SECTION 8: Material Producer's Certification	
attached description is complete and accurate to the best of my	edge and/or analytical data. I hereby certify that the above and knowledge and ability to determine that no deliberate or willful suspected hazards have been disclosed. I certify that the materials t.
Authorized Signature:	Date: <u>12/22/08</u>
Printed Name/Title: NA-Product	
Technical Manager: Loff Live Charge  Date: 12-29-08 Approved Rejected  Approval Number: 3/2 (	
Approval Number:	



# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1.	Base Pricing (including freight):
	Pay ConocoPhillips \$50.00 per ton
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
	NIA
4.	Special Testing Requirements:
	Test anothers by nacking or test run with soltidize equistic to ensure standard reaction occurs and that o'll closer not floor to the top after each reaction. Specific smith
	done not from to the top after each reaction. specific smith
	should be 1.81 and have a do-k ned color.
5.	Treatment and Handling Protocol:
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



# PROCESS FACILITY INFORMATION (CES USE ONLY!!)

7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);

# Material Safety Data Sheet

Sulfuric acid 90-98%

#### ACC# 22350

### Section 1 - Chemical Product and Company Identification

MSDS Name: Sulfuric acid 90-98%

Catalog Numbers: AC124640000, AC124640010, AC124640011, AC124640025, AC124640026, AC124645000, AC124645001, AC133610000, AC133610011, AC133610025, AC133610026, AC133610051, AC302070000, AC302070010, AC302070011, AC302070025, AC302070026, AC388270000, AC424520000, AC424520026, AC424525001, 13361-0010, 42452-0025, 42452-5000, A298-212, A298N119, A300-212, A300-225LB, A300-500, A300-500LC, A300-612GAL, A300-700LB, A300C-212, A300C-212002, A300C-212003, A300C-212LC, A300C212004, A300C212005, A300C212006, A300C212007, A300C212008, A300C212009, A300C212010, A300J-500, A300P-500, A300S-212, A300S-212LC, A300S-500, A300SI-212, A468-1, A468-2, A468-250, A468-500, A484-212, A510-212, A510-500, A510SK-212, NC9008405, NC9825433, S71211SC, S71211SCMF, S79200, SA174-212, SA174-4, SA176-4, SA196-500

**Synonyms:** Hydrogen sulfate; Oil of vitriol; Vitriol brown oil; Mattling acid; Battery acid; Sulphuric acid; Electrolyte acid; Dihydrogen sulfate; Spirit of sulfur; Chamber acid.

#### **Company Identification:**

Fisher Scientific 1 Reagent Lane Fair Lawn, NJ 07410

For information, call: 201-796-7100 Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

# Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7664-93-9	Sulfuric acid	90-98	231-639-5

11	Continu 2 Homenda Talentification
41	Section 3 - Hazards Identification
EI.	Section 5 Hazards Identification
11	

#### **EMERGENCY OVERVIEW**

Appearance: clear colorless to yellow liquid.

**Danger!** Causes eye and skin burns. Causes digestive and respiratory tract burns. May be fatal if mist inhaled. Strong inorganic acid mists containing sulfuric acid may cause cancer. Concentrated sulfuric acid reacts violently with water and many other substances under certain conditions. May cause lung damage. Hygroscopic (absorbs moisture from the air). Corrosive to metal.

Target Organs: Lungs, teeth, eyes, skin.

#### **Potential Health Effects**

**Eye:** Causes severe eye burns. May cause irreversible eye injury. May cause blindness. May cause permanent corneal opacification. The severity of injury depends on the concentration of the solution and the duration of exposure.

**Skin:** Causes skin burns. The severity of injury depends on the concentration of the solution and the duration of exposure.

**Ingestion:** May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.

**Inhalation:** May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Because its vapor pressure is negligible, it exists in the air only as a mist or spray. Exposure may impair lung function and cause mucostasis (reduced mucous clearance).

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Prolonged or repeated eye contact may cause conjunctivitis. Effects may be delayed. Workers chronically exposed to sulfuric acid mists may show various lesions of the skin, tracheobronchitis, stomatitis, conjunctivitis, or gastritis. Occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans.

### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid immediately.

**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

**Ingestion:** If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. **Inhalation:** POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Monitor arterial blood gases, chest x-ray, and pulmonary function tests if respiratory tract irritation or respiratory depression is evident. Treat dermal irritation or burns with standard topical therapy. Effects may be delayed. Do NOT use sodium bicarbonate in an attempt to neutralize the acid.

# Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Contact with water can cause violent liberation of heat and splattering of the material. Contact with metals may evolve flammable hydrogen gas. Runoff from fire control or dilution water may cause pollution. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Strong dehydrating agent, which may cause ignition of finely divided materials on contact. Oxides of sulfur may be produced in fire.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire. Do NOT get water inside containers. If water is used, care should be taken, since it can generate heat and cause spattering if applied directly to sulfuric acid.

Flash Point: Not applicable.

Autoignition Temperature: Not available. Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 2; Special Hazard: -W-

#### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8. **Spills/Leaks:** Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Carefully scoop up and place into appropriate disposal container. Provide ventilation. Do not get water inside containers. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

# Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not allow water to get into the container because of violent reaction. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes. Use only with adequate ventilation. Do not breathe spray or mist. Do not use with metal spatula or other metal items. Inform laundry personnel of contaminant's hazards.

**Storage:** Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store near alkaline substances. Store protected from moisture. Ideally, sulfuric acid should be stored in isolation from all other chemicals in an approved acid or corrosives safety cabinet.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use a corrosion-resistant ventilation system.

**Exposure Limits** 

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sulfuric acid	0.2 mg/m3 TWA (thoracic fraction)	1 mg/m3 TWA 15 mg/m3 IDLH	1 mg/m3 TWA

OSHA Vacated PELs: Sulfuric acid: 1 mg/m3 TWA

**Personal Protective Equipment** 

Eyes: Wear chemical splash goggles and face shield.

Skin: Wear neoprene gloves, apron, and/or clothing. Viton gloves are recommended.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

# Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: oily - clear colorless to yellow

Odor: odorless pH: 0.3 (1N solution)

Vapor Pressure: < 0.001 mm Hg @ 20 deg C

Vapor Density: 3.38 (air=1)

Molecular Weight: 98.07

Evaporation Rate: Slower than ether.

Viscosity: 21 mPas @ 25 C
Boiling Point: 290 - 338 deg C
Freezing/Melting Point:10 deg C
Decomposition Temperature:340 deg C
Solubility: Soluble with much heat
Specific Gravity/Density:1.84
Molecular Formula:H2SO4

Section 10 - Stability and Reactivity

**Chemical Stability:** Sulfuric acid reacts vigorously, violently or explosively with many organic and inorganic chemicals and with water.

**Conditions to Avoid:** Excess heat, exposure to moist air or water, Note: Use great caution in mixing with water due to heat evolution that causes explosive spattering. Always add the acid to water, never the reverse..

**Incompatibilities with Other Materials:** Metals, oxidizing agents, reducing agents, bases, acrylonitrile, chlorates, finely powdered metals, nitrates, perchlorates, permanganates, epichlorohydrin, aniline, carbides, fulminates, picrates, organic materials, flammable liquids.

Hazardous Decomposition Products: Oxides of sulfur.

**Hazardous Polymerization:** Has not been reported.

# Section 11 - Toxicological Information

RTECS#:

CAS# 7664-93-9: WS5600000

**LD50/LC50:** CAS# 7664-93-9:

Draize test, rabbit, eye: 250 ug Severe; Inhalation, mouse: LC50 = 320 mg/m3/2H; Inhalation, mouse: LC50 = 320 mg/m3; Inhalation, rat: LC50 = 510 mg/m3/2H; Inhalation, rat: LC50 = 510 mg/m3; Oral, rat: LD50 = 2140 mg/kg;

#### Carcinogenicity:

CAS# 7664-93-9:

- ACGIH: A2 Suspected Human Carcinogen (contained in strong inorganic acid mists)
- California: carcinogen, initial date 3/14/03 (listed as Strong inorganic acid mists containing sulfuric acid).
- NTP: Known carcinogen (listed as Strong inorganic acid mists containing s).
- **IARC:** Group 1 carcinogen

**Epidemiology:** Workers exposed to industrial sulfuric acid mist showed a statistical increase in laryngeal cancer. This suggests a possible relationship between carcinogenesis and inhalation of sulfuric acid mist.

**Teratogenicity:** Sulfuric acid was not teratogenic in mice and rabbits, but was slightly embryotoxic in rabbits (a minor, rare skeletal variation). The animals were exposed to 5 and 20 mg/m3 for 7 hr/day throughout pregnancy. Slight maternal toxicity was present at the highest dose in both species.

Reproductive Effects: No information found

**Mutagenicity:** There are no mutagenicity studies specifically of sulfuric acid. However, there are established effects of reduced pH in mutagenicity testing, as would be caused by sulfuric acid. These effects are an artifact of low pH and are not necessarily due to biological effects of sulfuric acid itself.

Neurotoxicity: No information found

Other Studies:

### Section 12 - Ecological Information

Ecotoxicity: Fish: Bluegill/Sunfish: 49 mg/L; 48Hr; TLm (tap water @ 20C)

Fish: Bluegill/Sunfish: 24.5 ppm; 48Hr; TLm (fresh water)

### Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed. RCRA U-Series: None listed.

# Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	SULFURIC ACID	SULFURIC ACID
Hazard Class:	8	8
UN Number:	UN1830	UN1830
Packing Group:	II	II

# Section 15 - Regulatory Information

#### **US FEDERAL**

#### **TSCA**

CAS# 7664-93-9 is listed on the TSCA inventory.

#### **Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

#### **Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

#### **CERCLA Hazardous Substances and corresponding RQs**

CAS# 7664-93-9: 1000 lb final RQ; 454 kg final RQ

#### **SARA Section 302 Extremely Hazardous Substances**

CAS# 7664-93-9: 1000 lb TPQ

#### SARA Codes

CAS # 7664-93-9: immediate, delayed, reactive.

#### Section 313

This material contains Sulfuric acid (CAS# 7664-93-9, 90-98%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

#### Clean Water Act:

CAS# 7664-93-9 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 7664-93-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

#### California Prop 65

# The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Sulfuric acid, listed as `Strong inorganic acid mists contain', a chemical known to the state of California to cause cancer.

California No Significant Risk Level: None of the chemicals in this product are listed.

# **European/International Regulations**

# **European Labeling in Accordance with EC Directives Hazard Symbols:**

C

#### **Risk Phrases:**

R 35 Causes severe burns.

#### **Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 30 Never add water to this product.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### WGK (Water Danger/Protection)

CAS# 7664-93-9: 2

#### Canada - DSL/NDSL

CAS# 7664-93-9 is listed on Canada's DSL List.

#### Canada - WHMIS

This product has a WHMIS classification of D2A, D1A, E.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

#### **Canadian Ingredient Disclosure List**

CAS# 7664-93-9 is listed on the Canadian Ingredient Disclosure List.

### Section 16 - Additional Information

**MSDS Creation Date:** 4/22/1999 **Revision #15 Date:** 2/13/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

Timothy J Hylla EMA / Plymouth Extruded Shapes April 21, 2006 Page 3 of 3

Should you have any questions, please contact Maridely M. Loyselle at (502) 564-6716, extension 220.

Sincerely,

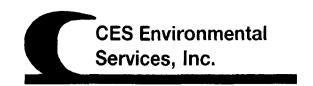
for April J. Webb P.E., Manager Hazardous Waste Branch Division of Waste Management

Tale Us- Butan

#### AJW/mml

c: Otis Johnson, EPA Region IV
John Jump, Hazardous Waste Branch
Maridely M. Loyselle, Hazardous Waste Branch
Jan Jasper, Hazardous Waste Branch
Malinda Mays, Hazardous Waste Branch
Diana Adams, Madisonville Regional Field Office
File Room – Main File
Reading File

Mr. Randy Hubbard Environmental Manager Plymouth Extruded Shapes 201 Commerce Court, Hopkinsville, KY 42240



# **Material / Product Approval Letter**

Date 1/8/2009

Dear

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3135

Expiration Date 1/8/2011

Producer: RasGas

Address: PO BOX 24200

DOHA - QATAR,

Material / Product Information

Name of Material / Product Sulfidic Caustic Solution

Container Type:

Ship

#### **Detailed Description of Process Generating or Producing the Material / Product:**

Processing of fuels using caustic to remove sulfides

Color: brown to red

Odor: sulfur / H2S smell

**pH:** 6-11

**Physical State:** 

Incompatibilities: Metals, Strong Acids Safety Related Data/Special Handling:

Chemical Suit, Rubber Gloves, Rubber boots, Safety Goggles, Face Shield, Hard Hat

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



# CES Environmental Services, Inc.

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com TCEQ Industrial Solid Waste Permit No: 30948

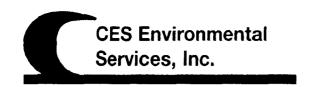
U.S. EPA ID No: TXD008950461 ISWR No: 30900

ned approved in Dystem. P# 3135-PA

SECTION 1: Materi	ial Producer Information						
Company :	RasGas						
Address :	PO BOX 24200 PO B	3OX 24200					
City, State, Zip:	DOHA - QATAR						
Contact :				Title:		200	
Phone No :				Fax:			
24 / HR Phone :							
U.S EPA I.D No :							
State I.D :				SIC Code			
SECTION 2: Billing	Information						
Company :	RasGas						
Address :	PO BOX 24200 PO E	OX 24200					
City, State, Zip :	DOHA - QATAR						
Contact :				Title :			
Phone No :				Fax:			
SECTION 3: Genera	al Description of the Ma	terial / Product					
Name of Mateiral	/ Product : Sulfidic Ca	ustic Solution					
Detailed Descript	tion of the Process G	enerating or Produ	cing the M	laterial / Produc	t:		
Processing of fuel	s using caustic to remo	ove sulfides					
Physical State :	Liquid	Sludge	[.	Powder			
	Solid	Filter Cake		Combination			
Color :		brown to red	Odor	·:		sulfur / H2S s	mell
Specific Gravity (	(Water=1) :	1.03	Dens	sity:		8.6-9.2	lbs / gal
Does this material	contain any total pheno	ic compounds?	Yes	<b>✓</b> No			
Does this material	contain any para substi	uted phenolic compo	ounds?	Yes	<b>✓</b> No		
Layers :	✓ Single-Phas	Multi-Pha	se				
Container Type :	Drum _	Tote	Truck	✓ Other (exp	olain)	Ship	)
Container Size :	340,000 gallon:						
Number Of Units	: 1						
Proper U.S. DOT	Shipping Name :			Sodium Hydroxid	de Solutior	1	
Class: 8	UN/N			PG· II		D	٥.

	Flash Point pH 6-11		Reactive Sulfides	Reactive Cyanides  1  mg/l	Solids O %	
Ī	Oil and Grease	TOC	Zinc	Copper	Nickel	
1	mg/l	mg/l	mg/l	mg/l	mg/l	

SECTION 4: Physical and Chemical Data		
COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Sodium Hydroxide	8-10	%
Water	90-92	%
SECTION 5: Safety Related Data		<del></del>
If the handling of this material / product requires the use of special protective Chemical Suit, Rubber Gloves, Rubber boots, Safety Goggles, Face Shield, Hard F		
SECTION 6: Attached Supporting Documents		
List all documents, notes, data, and/or analysis attached to this form as part of MSDS	of the material / product profile.	
SECTION 7: Incompatibilities		
Please Iist all incompatibilities (if any): Metals, Strong Acids		
SECTION 8: Material Producer's Certification		
The information contained herein is based on generator knowledge and/cabove and attached description is complete and accurate to the best of my kradeliberate or willful omissions of composition properties exist and that all knowledge. I certify that the materials tested are representative of all materials	nowledge and ability to determine own or suspected hazards have b	that no
Authorized Signature :	Date :	
Printed Name / Title : /		
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process Facility Information	າ :
Compliance Officer: Letter The		
Date: 1-8-09 Status: Approved) Rejected		
Approval Number: PA-3135		



# **Material / Product Approval Letter**

Date 1/8/2009

Dear Randy Woolvine

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3136

Expiration Date 1/8/2011

Producer: Citgo Refinery

Address: 4401 LA Hwy 108

Lake Charles, LA 70665

Material / Product Information

Name of Material / Product Phenolic Caustic Solution

**Container Type:** Barge

#### Detailed Description of Process Generating or Producing the Material / Product:

Processing of fuels using caustic to remove sulfides

Color: red to brown Odor: slight to medium pH: 10.5-12.5

**Physical State:** 

Incompatibilities: Metals, Oxidizing Agents Safety Related Data/Special Handling:

Chemical Suits, Rubber Gloves, Rubber Boots, Safety Goggles, Face Shield, Hard Hat

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



# CES Environmental Services, Inc.

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900 Need Approvaling System. P# 3136-PA

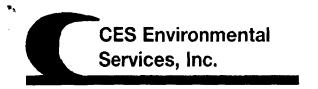
Physical State:  Color: Specific Gravity Does this material Does this material Layers:  Container Type: Container Size: Number Of Units	contain any total phenoicontain any para substite  Single-Phas  Drum  340K gallons	tuted phenolic compour		r _{os} vaneau	slight to med 9.5-10 Barg	lbs / gal
Physical State :  Color :  Specific Gravity  Does this material	Solid  (Water=1):  contain any total phenologontain any para substite  Single-Phas  Drum  340K gallons	Filter Cake  red to brown  1-1.2  lic compounds?  tuted phenolic compour	Combination Odor: Density: Yes No		9.5-10	lbs / gal
Physical State :  Color :  Specific Gravity  Does this material  Does this material  Layers :  Container Type :	(Water=1) :  contain any total phenologontain any para substit  Single-Phas  Drum	Filter Cake  red to brown  1-1.2  lic compounds?  tuted phenolic compour	Combination Odor: Density: Yes No		9.5-10	lbs / gal
Physical State :  Color :  Specific Gravity  Does this material  Does this material  Layers :	Solid  (Water=1):  contain any total phenolocontain any para substit	Filter Cake  red to brown  1-1.2  lic compounds?  tuted phenolic compour	Combination Odor: Density: Yes No		9.5-10	lbs / gal
Physical State :  Color :  Specific Gravity  Does this material  Does this material	(Water=1) : contain any total phenoleontain any para substit	Filter Cake red to brown 1-1.2 lic compounds? tuted phenolic compounds	Combination Odor: Density: Yes No	✓ No		
Physical State :  Color :  Specific Gravity  Does this material	Solid (Water=1) : contain any total pheno	Filter Cake red to brown 1-1.2 lic compounds?	Combination Odor: Density:  Yes No	<b>✓</b> No		
Physical State : Color : Specific Gravity	Solid  (Water=1):	Filter Cake red to brown 1-1.2	Combination Odor: Density:			
Physical State :	Solid	Filter Cake	Combination Odor :			
Physical State :	Solid	Filter Cake	Combination			
Physical State :		Filter Cake	Combination		alight to model	i
_						
_	<b>✓</b> Liquid	Sludge	Powder			
i locessing of fue						
Processing of fue	ls using caustic to remo	ove sulfides				
Detailed Descrip	tion of the Process G	enerating or Producii	ng the Material / Produ	ct:		
Name of Mateira	I / Product : Phenolic C	Caustic Solution				
SECTION 3: Gener	ral Description of the Ma	terial / Product				
Phone No :	(337) 708-8274		Fax :	(337) 708-6	289	
Contact :	Randy Woolvine		Title :			
City, State, Zip :	Houston TX 77210					
Address :	P. O. Box 4970			The books of the Control		
Company :	Citgo Accounts Payab	ole				
SECTION 2: Billing	g Information					
State 1.D.	Common the Management of the Common terror of the C		Sic Code			
U.S EPA I.D No : State I.D :			SIC Code			
24 / HR Phone :						
Phone No:	(337) 708-6344		Fax:			
	Mike Robison		Title :			
Contact :	Lake Charles LA 7066	35		AT		
•		01 LA Hwy 108				
City, State, Zip :	4401 LA Hwy 108 44					
Company: Address: City, State, Zip: Contact:	Citgo Refinery 4401 LA Hwy 108 44					

Γ	Flash Point	рН	Reactive Sulfides	Reactive Cyanides	Solids
	N/A	10.5-12.5	N/A mg/l	N/A mg/l	0 %
Γ	Oil and Grease	TOC	Zinc	Copper	Nickel
ı	N/A mg/l	N/A mg/l	N/A mg/l	N/A mg/l	N/A mg/l

### SECTION 4: Physical and Chemical Data

eptable or %	Ranges are acceptable	The material / product consists of the following materials
%	0.40	
	3-12	Sodium Hydroxide
000 mg/	7,500 -250,000	Phenols
%	88-97	Water
	, - ,	

mg/ I %
%
ty that the nat no en
:



# **Material / Product Approval Letter**

Date 1/8/2009

Dear Randy Woolvine

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3137

Expiration Date 1/8/2011

**Producer:** Citgo Refinery **Address:** 4401 LA Hwy 108

Lake Charles, LA 70665

Material / Product Information

Name of Material / Product Napthenic Caustic Solution

Container Type: Barge

Detailed Description of Process Generating or Producing the Material / Product:

Processing of fuels using caustic to remove sulfides

Color: brown to red Odor: slight to medium pH: 6-12.5

**Physical State:** 

Incompatibilities: Metals, Oxidizing Agents Safety Related Data/Special Handling:

Chemical Suit, Rubber Gloves & boots, Safety Goggles, Face Shield, Hard Hat

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.





4904 Griggs Road

Houston, TX 77021
Fax: (713) 676-1676

Phone: (713) 676-1460 Fax: (713) 676-16 http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Materi	ial Producer Information	1					
Company :	Citgo Refinery						
Address :	4401 LA Hwy 108 44	101 LA Hwy 108					
City, State, Zip :	Lake Charles LA 706	65					
Contact :	Mike Robison			Title:			
Phone No :	(337) 708-6344			Fax:			
24 / HR Phone :							
U.S EPA I.D No:							
State I.D :				SIC Code			- No
SECTION 2: Billing	Information						
Company :	Citgo Accounts Paya	ble			100		
Address :	P. O. Box 4970			,,			
City, State, Zip :	Houston TX 77210						
Contact :	Randy Woolvine			Title :			
Phone No :	(337) 708-8274			Fax:	(337) 708	-6289	
SECTION 3: Ganer	al Description of the Ma	aterial / Product					
	/ Product : Napthenic						
	·		. i 41 88	Annini / Dunalu	-4.		
-	tion of the Process G	_	ing the Ma	teriai / Produ	Ct.		
Processing of fuel	s using caustic to rem	ove suffices					
Physical State :	✓ Liquid	Sludge	2	Powder			
	Solid	Filter Cake		Combination			
Color :		brown to red	Odor :			slight to med	ium
Specific Gravity (	(Water=1) :	.95-1.1	Densit	y :		8.5-9	lbs / gal
Does this material o	contain any total pheno	lic compounds?	✓ Yes	☐ No			
Does this material	contain any para subst	tuted phenolic compo	unds?	Yes	☐ No		
_ayers :	<b>✓</b> Single-Phas	Multi-Phas	se				
Container Type :	Drum	Tote 📋	Truck	Other (ex	plain)	Barg	e
Container Size :	340K gallons						
Number Of Units	: 2						
Proper U.S. DOT	Shipping Name :		S	odium Hydrox	ide Solutio	n	
•	· · · -						

Flash Point	рН	Reactive Sulfides	Reactive Cyanides	Solids
N/A	6-12.5	N/A mg/l	N/A mg/l	0 %
Oil and Grease	TOC	Zinc	Copper	Nickel
N/A mg/l	N/A mg/l	N/A mg/l	N/A mg/l	N/A mg/l

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units
The material / product consists of the following materials	Ranges are acceptable	or %
Sodium Hydroxide	0-1	%
Napthenic Acid	2-6	%
Phenols	<10K	mg / I
Water	93-98	%

Sodium Hydroxide	0-1 %
Napthenic Acid	2-6 %
Phenois	<10K mg
Water	93-98 %
SECTION 5: Safety Related Data	
If the handling of this material / product requires the use Chemical Suit, Rubber Gloves & boots, Safety Goggles, Face	
SECTION 6: Attached Supporting Documents	
List all documents, notes, data, and/or analysis attached MSDS	to this form as part of the material / product profile.
SECTION 7: Incompatibilities	
Please list all incompatibilities (if any): Metals, Oxidizing Agents	
SECTION 8: Material Producer's Certification	
Authorized Signature :	Date :
Printed Name / Title : /	
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process Facility Information :
Compliance Officer: Kobbut Thys	
Date: 1-7-09 Status: Approved)	Rejected
Approval Number: PA-3137	



4904 Griggs Road Houston TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1460

# **Material / Product Approval Letter**

Date 1/29/2009

Dear Sal Amato

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3163

**Expiration Date** 1/29/2011

Producer: Sochem

Address:

#### Material / Product Information

Name of Material / Product Sulfidic Caustic Solutions > 15%

**Container Type:** 

#### Detailed Description of Process Generating or Producing the Material / Product:

Spent Caustic used to scrub sulfids from fuel products

Color: brown to red

Odor: sulphur h2s smell

**pH**: 10-12

**Physical State:** 

**Incompatibilities:** 

Safety Related Data/Special Handling:

PPE H2S monitor

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

# CES Environmental Services, Inc.

4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Mater	rial Producer Information				
Company:	Sochem				
Address :	P.O. Box 1912				* * ***********************************
City, State, Zip :					
Contact :	Sal Amato		Title :		
Phone No :	(225) 644-3180		Fax:		
24 / HR Phone :					
U.S EPA I.D No	•				
State I.D :			SIC Code		
SECTION 2: Billin	g Information				
Company :	Sochem				
Address :	P.O. Box 1912				
City, State, Zip :				** • ** • • • • • • • • • • • • • • • •	
Contact :	Sal Amato		Title :		
Phone No :	(225) 644-3180		Fax:		
SECTION 3: Gener	ral Description of the Mate	rial / Product			
	al / Product :Sulfidic Cau	mark to the same of			
Detailed Descrip	otion of the Process Ger	nerating or Produci	ng the Material / Produc	et:	
Spent Caustic us	ed to scrub sulfids from fu	uel products			
Physical State :	Liquid	Sludge	Powder		
	Solid	Filter Cake	Combination		
Color :		brown to red	Odor :	sulphur h2s	smell
Specific Gravity	(Water=1) :	1.32	Density :		lbs / gal
Does this material	contain any total phenolic	compounds?	Yes No		
Does this material	contain any para substitu	ted phenolic compour	nds? Yes	No	
Layers :	Single-Phas	Multi-Phase			
Container Type :	: Drum	Tote	Truck 🔲 Other (exp	olain)	
Container Size :	4500 g				
Number Of Units	s: 2				
Proper U.S. DOT	Shipping Name :		sodium hydroxide solu	ition, 8, un1824, II	
Class: 8	IIN/NA	. 1824	pc· 2	. 3.01	

Γ	Flash Point	рН	Reactive Sulfides	Reactive Cyanides	Solids
	>140	10-12	NA mg/l	NA mg/l	NA %
Γ	Oil and Grease	тос	Zinc	Copper	Nickel
I	NA mg/l	NA mg/l	NA mg/l	NA mg/l	NA mg/l

# SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units	
The material / product consists of the following materials	Ranges are acceptable	or %	
water	70-85	%	
sodium hydroxide	15-30	%	
TION 5: Safety Related Data			

	1
SECTION 5: Safety Related Data	
If the handling of this material / product requires the use of special prote PPE H2S monitor	ective equipment, please explain.
SECTION 6: Attached Supporting Documents	
List all documents, notes, data, and/or analysis attached to this form as	part of the material / product profile.
SECTION 7: Incompatibilities	
Please list all incompatibilities (if any):	
SECTION 8: Material Producer's Certification  The information contained herein is based on  generator knowledge a above and attached description is complete and accurate to the best of redeliberate or willful omissions of composition properties exist and that a disclosed. I certify that the materials tested are representative of all materials.	my knowledge and ability to determine that no all known or suspected hazards have been
Authorized Signature :	Date :
Printed Name / Title : /	
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process Facility Information :
Compliance Officer: Matt Bowman	
Date: 1/28/2009 Status: Approved Rejected	
Approval Number : PA-3163	



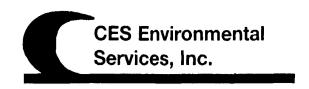
# PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
#100/Dry ton - taying
2. Contamination Limit (maximum limit before surchages apply):
3. Surcharge Pricing:
4. Special Testing Requirements:
Titration, Density ? Ph
it that is the same of the sam
5. Treatment and Handling Protocol:
Raw Stock for 1975H
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



# PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

7. Tests for Produc	ct Recovered/Recyc	led (if applicable	):	
8. Management fo	or Product Recovere	ed/Recycled (if ap	oplicable)	



# **Material / Product Approval Letter**

Date 2/12/2009

Dear Ramiz Talifaz

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3164

**Expiration Date** 2/12/2011

**Producer:** Kosovo Government

Address:

Material / Product Information

Name of Material / Product Disulfide Oil

**Container Type:** Iso Container

**Detailed Description of Process Generating or Producing the Material / Product:** 

Containers of oil consolidated into iso containers

Color: Green, Born to Black Odor: Pungent pH: 4-10

**Physical State:** 

Incompatibilities: Bleach, Strong Oxidizers, Reducing Agents, Acids corrosive to

Copper & Copper Alloys

Safety Related Data/Special Handling:

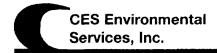
FLAMMABLE PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.





4904 Griggs Road Phone: (713) 676-1460 Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Materi	ial Producer Inform	ation			
Company:	Kosovo Governn	nent			
Address :					
City, State, Zip :					
Contact :			Title:		
Phone No :			Fax:		
24 / HR Phone :					
U.S EPA I.D No :					
State I.D :		<del>-</del>	SIC Code		
SECTION 2: Billing	Information				
Company:	Kosovo Governn	nent			
Address :					
City, State, Zip:					
Contact :	Ramiz Talifaz	# * # # # # # # # # # # # # # # # # # #	Title :		
Phone No :	(281) 300-5322		Fax :		
SECTION 3: Gener	al Description of th	e Material / Product			
Name of Mateiral	I / Product : Disulf	ide Oil			
<b>Detailed Descrip</b>	tion of the Proce	ss Generating or Produci	ng the Material / Produ	ct:	
Containers of oil of	consolidated into is	so containers			
Physical State :	✓ Liquid	Sludge	Powder		
	Solid	Filter Cake	Combination		
Color:		Green, Born to Black	Odor :	Pt	ungent
Specific Gravity	(Water=1) :	.99-1.06	Density :	8.2-8.8	B lbs / gal
Does this material	contain any total p	henolic compounds?	Yes V No		
Does this material	contain any para s	ubstituted phenolic compou	nds? Yes	<b>✓</b> No	
Layers :	✓ Single-P	has Multi-Phase	e		
Container Type :	Drum	Tote	Truck 📝 Other (ex	plain) ls	so Container
Container Size :	3000gallons				
Number Of Units	3				
Proper U.S. DOT	Shipping Name	RQ, UN	1993, Flammable Liquids	, N.O.S. (disufide oil)	ı, 3, PG II
Class: 3		UN/NA: UN 1993	PG: II		<b>RQ</b> : 100

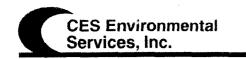
ſ	Flash Point	рН	Reactive Sulfides	Reactive Cyanides	Solids
	<86	4-10	N/A mg/l	N/A mg/I	0 %
ſ	Oil and Grease	тос	Zinc	Copper	Nickel
١	>1500 mg/l	N/A mg/l	N/A mg/l	N/A mg/l	N/A mg/l

### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	Concentration	Units	
The material / product consists of the following materials	Ranges are acceptable	or %	
WATER	0-5	%	
DISULFIDE OIL SOLUTIONS	95-100	%	

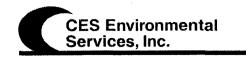
WATER	0-5	%
DISULFIDE OIL SOLUTIONS	95-100	%
SECTION 5: Safety Related Data		
If the handling of this material / product requires the use of special protecti FLAMMABLE PPE	ve equipment, please explain.	
SECTION 6: Attached Supporting Documents		
List all documents, notes, data, and/or analysis attached to this form as par MSDS	rt of the material / product profile.	
SECTION 7: Incompatibilities		
Please list all incompatibilities (if any): Bleach, Strong Oxidizers, Reducing Agents, Acids corrosive to Copper & Copper	· Alloys	
SECTION 8: Material Producer's Certification		
The information contained herein is based on generator knowledge and above and attached description is complete and accurate to the best of my deliberate or willful omissions of composition properties exist and that all lidisclosed. I certify that the materials tested are representative of all materials	knowledge and ability to determin mown or suspected hazards have	e that no
Authorized Signature: HATT PRIMARY	attate Rounia	Tomas reces
Printed Name / Title : /		
CES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process Facility Informati	on:
Compliance Officer: Matt Bowman Lebendhyl	\$128,946.82 for 3 iso conta	iners
Date: Z-12-89 Status: (Approved) Rejected		
Approval Number: PA-3164		

+3164



## PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
#128,9416.82 for 3es conterenes
2. Contamination Limit (maximum limit before surchages apply):
3. Surcharge Pricing:
4. Special Testing Requirements:
Section, BTU, Ash, Zine, Iron & Chlorides
5. Treatment and Handling Protocol:
Std as is to PEARS
6. Treated Wastewater Discharge Subcategory:
Subcategory A Subcategory B Subcategory C



## PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

7. Tests for Produ	t Recovered/Recycled (	(if applicable):	 
8. Management fo	r Product Recovered/R	ecycled (if applicable)	
8. Management fo	r Product Recovered/R	ecycled (if applicable)	 
8. Management fo	r Product Recovered/R	ecycled (if applicable)	
8. Management fo	r Product Recovered/R	ecycled (if applicable)	

#### **DISULFIDE OIL SOLUTIONS**

PRODUCT IDENTIFICATION AND USE

MANUFACTURER:

CES ENVIRONMENTAL SERVICES, INC.

4904 GRIGGS ROAD HOUSTON, TX 77021

**EMERGENCY PHONE NUMBER:** 

(713) 676-1460

PRODUCT IDENTIFIER:

DISULFIDE OIL SULFIDING AGENT

PRODUCT USE:

B2 - FLAMMABLE LIQUID.

WHMIS CLASSIFICATION:

D1A - VERY TOXIC MATERIAL CAUSING IMMEDIATE AND

SERIOUS TOXIC EFFECTS

D2B - TOXIC MATERIAL CAUSING OTHER TOXIC EFFECTS

HAZARDOUS INGREDIENTS

%W/W

CAS#

TLV

DISULFIDE OIL SOLUTIONS

95 5 None

ACGIH TWA = 0.5 PPM

WATER

LD50: 290 TO 500 MG/KG (ORAL-RATS)

(SKIN)

LD50: >2,000 MG/KG (DERMAL-RATS)

LC50: 1,310 PPM (4-HR. - INHALATION-RATS) NOTE: Mixture of Dimethyl Disulfide, Diethyl

Disulfide, Methyl Ethyl Disulfide

PHYSICAL DATA

PHYSICAL STATE:

ODOR AND APPEARANCE:

LIQUID GREEN, BROWN, BLACK LIQUID, STRONG PUNGENT ODOR

ODOR THRESHOLD:

8-10 (PPB) SPECIFIC GRAVITY/DENSITY (G/ML): 0.99 - 1.06 @ 20°C

VAPOR PRESSURE:

0.4 PSIA

VAPOR DENSITY (AIR = 1):

3.25

VOLATILITY/VOL (%):

100

SOLUBILITY IN H20:

**INSOLUBLE** 

**EVAPORATION RATE** 

NE

**BOILING POINT:** 

105-120°C

**FREEZING POINT:** 

-80°C

PH.

NA

## SHIPPING INFORMATION

UN 1993, 3, II, DISULFIDE OIL

U.S.DOT 49 CFR 172.101:

PROPER SHIPPING NAME: FLAMMABLE LIQUIDS, N.O.S. (DISULFIDE OIL)

ID NUMBER: UN1993

HAZARD CLASS OR DIVISION: 3

PACKING GROUP: II

LABELING REQUIREMENTS: 3

* NA - NOT APPLICABLE

* NE - NOT ESTABLISHED

#### **DISULFIDE OIL SOLUTIONS**

FIRE AND EXPLOSION HAZARD

FLAMMABILITY:

**FLAMMABLE** 

CONDITIONS:

HEAT, SPARKS, OPEN FLAMES

MEANS OF EXTINCTION:

WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY

CHEMICAL. WATER MAY BE INEFFECTIVE.

FLASHPOINT:

< 30°C

UPPER EXPLOSION LIMIT (% V):

16 APPROX.

LOWER EXPLOSION LIMIT (% V):

1.1 APPROX.

AUTO-IGNITION TEMPERATURE:

300°C (572°F) APPROX.

HAZARDOUS COMBUSTION PRODUCTS:

OXIDES OF CARBON, SULFUR OXIDES, HYDROGEN

**SULFIDE** 

**EXPLOSION DATA**:

NE

SENSITIVITY TO IMPACT:

NO

SENSITIVITY TO STATIC DISCHARGE:

NO

#### REACTIVITY

CHEMICAL STABILITY:

STABLE

**INCOMPATIBLE MATERIALS:** 

BLEACH, STRONG OXIDIZERS, REDUCING AGENTS, ACIDS

v.

CONDITIONS OF REACTIVITY:

DECOMPOSITION TEMPERATURE: 390°C

CORROSIVE TO COPPER AND COPPER ALLOYS.

HAZARDOUS DECOMPOSITION

HYDROGEN SULFIDE, METHYL MERCAPTAN. CAN REACT

PRODUCTS:

WITH CARBON STEEL TO FORM PYROPHORIC IRON

SULFIDES.

## **HEALTH HAZARD INFORMATION**

**ROUTE OF ENTRY** 

SKIN CONTACT:

MAY CAUSE IRRITATION

SKIN ABSORPTION:

NE

<u>EYE</u>: <u>INGESTION</u>: MAY CAUSE IRRITATION HARMFUL IF SWALLOWED

INHALATION:

HARMFUL IF INHALED

ACUTE OVER EXPOSURE EFFECTS: CHRONIC OVER EXPOSURE EFFECTS:

NE

SENSITIZATION:

DOES NOT MEET WHMIS CRITERIA

CARCINOGENICITY:
TERATOGENICITY:

DOES NOT MEET WHMIS CRITERIA DOES NOT MEET WHMIS CRITERIA DOES NOT MEET WHMIS CRITERIA

MUTAGENICITY:
REPRODUCTIVE TOXICITY:

DOES NOT MEET WHMIS CRITERIA

## PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

WEAR SAFETY GOGGLES AND IMPERVIOUS

GLOVES. WHERE AIRBORNE EXPOSURE IS LIKELY,

WEAR A NIOSH APPROVED RESPIRATOR

SPECIFIC ENGINEERING CONTROLS:

EQUIPPED WITH AN ORGANIC VAPOR CARTRIDGE. LOCAL EXHAUST IS RECOMMENDED.

#### **DISULFIDE OIL SOLUTIONS**

LEAK AND SPILL PROCEDURES:

ABSORB SMALL SPILLS WITH SAND. DIKE LARGE SPILLS AND COVER WITH FOAM OR WATER SPRAY TO REDUCE VAPOR EMISSIONS. TRANSFER TO A

CLOSED CONTAINER. TREAT AREA WITH HOUSEHOLD BLEACH TO ELIMINATE ODOR. DO

NOT USE SOLID BLEACH.

WASTE DISPOSAL:

HAZARDOUS WASTE. DO NOT ALLOW PRODUCT

TO ENTER THE ENVIRONMENT. CONSULT FEDERAL OR LOCAL AUTHORITIES FOR APPROVED

DISPOSAL METHODS.

HANDLING PROCEDURES AND

**EQUIPMENT:** 

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES. WASH BEFORE EATING, DRINKING, USING TOBACCO PRODUCTS, OR RESTROOMS. KEEP IN A CLOSED, LABELED CONTAINER IN A VENTILATED AREA. CONTAINER HAZARDOUS

STORAGE REQUIREMENTS:

WHEN EMPTY.

FIRST AID MEASURES

EYE:

FLUSH EYES WITH LARGE AMOUNT OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN SEEK

MEDICAL ATTENTION.

SKIN:

WASH SKIN WITH WATER AND SOAP. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS OR PERSISTS.

INGESTION:

DO NOT GIVE LIQUIDS IF PERSON IS UNCONSCIOUS OR

VERY DROWSY. DO NOT INDUCE VOMITING. SEEK

IMMEDIATE MEDICAL ATTENTION.

INHALATION:

REMOVE PERSON TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, APPLY ARTICIAIAL

RESPIRATION AND ADMINISTER OXYGEN IF NECESSARY.

SEEK MEDICAL ATTENTION.

#### REGULATORY INFORMATION

#### U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4); NOT REGULATED.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 30): NOT REGULATED.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40): NOT REGULATED.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: NO CHRONIC: NO FIRE: YES REACTIVE: NO

SUDDEN RELEASE: NO

* NA - NOT APPLICABLE

* NE - NOT ESTABLISHED

# MATERIAL SAFETY DATA SHEET DISULFIDE OIL SOLUTIONS

SARA TITLE III SECTION 313 (40 CFR 372.65): NOT REGULATED

OSHA PROCESS SAFETY (29 CFR 1910.119): NOT REGULATED

PREPARATION DATE

PREPARED BY:

CES TECHNICAL DEPARTMENT

PHONE NUMBER OF PREPARER:

(713) 676-1460

DATE PREPARED (MM/DD/YY): 07/28/08

MINIMUM CONTACT WITH THIS AND ALL CHEMICALS IS RECOMMENDED AS A GOOD GENERAL POLICY TO FOLLOW.

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE AND THE CONDITIONS OF HANDLING AND USE OR MISUSE ARE BEYOND OUR CONTROL, CES ENVIRONMENTAL SERVICES, INC. MAKES NO WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

#### **DISULFIDE OIL SOLUTIONS**

PRODUCT IDENTIFICATION AND USE

MANUFACTURER:

CES ENVIRONMENTAL SERVICES, INC.

4904 GRIGGS ROAD HOUSTON, TX 77021

**EMERGENCY PHONE NUMBER:** 

(713) 676-1460

PRODUCT IDENTIFIER:

DISULFIDE OIL SULFIDING AGENT

PRODUCT USE:

B2 - FLAMMABLE LIQUID.

WHMIS CLASSIFICATION:

32 - FLAMMABLE LIQUID.

D1A – VERY TOXIC MATERIAL CAUSING IMMEDIATE AND SERIOUS TOXIC EFFECTS

D2B - TOXIC MATERIAL CAUSING OTHER TOXIC EFFECTS

HAZARDOUS INGREDIENTS

%W/W

CAS#

1 to V

DISULFIDE OIL SOLUTIONS

95

None

ACGIH TWA = 0.5 PPM

WATER

LD50: 290 TO 500 MG/KG (ORAL-RATS)

5

(SKIN)

LD50: >2,000 MG/KG (DERMAL-RATS)

LC50: 1,310 PPM (4-HR. - INHALATION-RATS)

NOTE: Mixture of Dimethyl Disulfide, Diethyl

Disulfide, Methyl Ethyl Disulfide

PHYSICAL DATA

PHYSICAL STATE:

LIQUID

ODOR AND APPEARANCE:

GREEN, BROWN, BLACK LIQUID, STRONG PUNGENT ODOR

ODOR THRESHOLD: 8-1

8-10 (PPB)

SPECIFIC GRAVITY/DENSITY (G/ML): 0.99 - 1.06 @ 20°C

0.99 – 1.06 ( 0.4 PSIA

VAPOR PRESSURE: VAPOR DENSITY (AIR = 1):

3.25

VOLATILITY/VOL (%):

100

SOLUBILITY IN H²0:

INSOLUBLE

EVAPORATION RATE BOILING POINT:

NE 105-120°C

FREEZING POINT

9090

PH

-80°C NA

#### SHIPPING INFORMATION

UN 1993, 3, II, DISULFIDE OIL

U.S.DOT 49 CFR 172.101:

PROPER SHIPPING NAME: FLAMMABLE LIQUIDS, N.O.S. (DISULFIDE OIL)

ID NUMBER: UN1993

HAZARD CLASS OR DIVISION: 3

PACKING GROUP: II

**LABELING REQUIREMENTS: 3** 

* NA - NOT APPLICABLE

* NE - NOT ESTABLISHED

#### **DISULFIDE OIL SOLUTIONS**

FIRE AND EXPLOSION HAZARD

FLAMMABILITY:

**FLAMMABLE** 

CONDITIONS:

HEAT, SPARKS, OPEN FLAMES

MEANS OF EXTINCTION:

WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY

CHEMICAL. WATER MAY BE INEFFECTIVE.

FLASHPOINT:

UPPER EXPLOSION LIMIT (% V):

16 APPROX.

< 30°C

LOWER EXPLOSION LIMIT (% V):

1.1 APPROX.

AUTO-IGNITION TEMPERATURE:

300°C (572°F) APPROX.

HAZARDOUS COMBUSTION PRODUCTS:

OXIDES OF CARBON, SULFUR OXIDES, HYDROGEN

**SULFIDE** 

EXPLOSION DATA:

NE

SENSITIVITY TO IMPACT:

NO NO

SENSITIVITY TO STATIC DISCHARGE:

REACTIVITY

CHEMICAL STABILITY:

**INCOMPATIBLE MATERIALS:** 

STABLE

BLEACH, STRONG OXIDIZERS, REDUCING AGENTS, ACIDS

CORROSIVE TO COPPER AND COPPER ALLOYS.
DECOMPOSITION TEMPERATURE: 390°C

CONDITIONS OF REACTIVITY

HAZARDOUS DECOMPOSITION

PRODUCTS:

HYDROGEN SULFIDE, METHYL MERCAPTAN. CAN REACT

WITH CARBON STEEL TO FORM PYROPHORIC IRON

SULFIDES.

#### HEALTH HAZARD INFORMATION

**ROUTE OF ENTRY** 

SKIN CONTACT:

MAY CAUSE IRRITATION

SKIN ABSORPTION:

NE

EYE: INGESTION: MAY CAUSE IRRITATION HARMFUL IF SWALLOWED

INHALATION:

HARMFUL IF INHALED

ACUTE OVER EXPOSURE EFFECTS: CHRONIC OVER EXPOSURE EFFECTS:

NE NE

SENSITIZATION: CARCINOGENICITY: TERATOGENICITY:

DOES NOT MEET WHMIS CRITERIA DOES NOT MEET WHMIS CRITERIA

TERATOGENICITY:
MUTAGENICITY:
REPRODUCTIVE TOXICITY:

DOES NOT MEET WHMIS CRITERIA DOES NOT MEET WHMIS CRITERIA DOES NOT MEET WHMIS CRITERIA

## **PREVENTIVE MEASURES**

2

PERSONAL PROTECTIVE EQUIPMENT:

WEAR SAFETY GOGGLES AND IMPERVIOUS

GLOVES. WHERE AIRBORNE EXPOSURE IS LIKELY,

WEAR A NIOSH APPROVED RESPIRATOR

SPECIFIC ENGINEERING CONTROLS:

EQUIPPED WITH AN ORGANIC VAPOR CARTRIDGE. LOCAL EXHAUST IS RECOMMENDED.

* NA - NOT APPLICABLE

* NE - NOT ESTABLISHED

EPAHO041000543

#### DISULFIDE OIL SOLUTIONS

ABSORB SMALL SPILLS WITH SAND. DIKE LARGE LEAK AND SPILL PROCEDURES:

> SPILLS AND COVER WITH FOAM OR WATER SPRAY TO REDUCE VAPOR EMISSIONS. TRANSFER TO A

CLOSED CONTAINER. TREAT AREA WITH

HOUSEHOLD BLEACH TO ELIMINATE ODOR. DO

NOT USE SOLID BLEACH.

HAZARDOUS WASTE. DO NOT ALLOW PRODUCT WASTE DISPOSAL:

TO ENTER THE ENVIRONMENT. CONSULT

FEDERAL OR LOCAL AUTHORITIES FOR APPROVED

DISPOSAL METHODS

HANDLING PROCEDURES AND

STORAGE REQUIREMENTS:

**EQUIPMENT:** 

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES, WASH BEFORE EATING, DRINKING, USING TOBACCO PRODUCTS, OR RESTROOMS.

KEEP IN A CLOSED, LABELED CONTAINER IN A

VENTILATED AREA. CONTAINER HAZARDOUS

WHEN EMPTY.

FIRST AID MEASURES

FLUSH EYES WITH LARGE AMOUNT OF WATER FOR EYE:

15 MINUTES WHILE HOLDING EYELIDS OPEN. SEEK

MEDICAL ATTENTION.

SKIN: WASH SKIN WITH WATER AND SOAP. SEEK MEDICAL

ATTENTION IF IRRITATION OCCURS OR PERSISTS. DO NOT GIVE LIQUIDS IF PERSON IS UNCONSCIOUS OR

VERY DROWSY. DO NOT INDUCE VOMITING. SEEK

IMMEDIATE MEDICAL ATTENTION.

INHALATION: REMOVE PERSON TO FRESH AIR IMMEDIATELY. IF

BREATHING HAS STOPPED, APPLY ARTICIAIAL

RESPIRATION AND ADMINISTER OXYGEN IF NECESSARY.

SEEK MEDICAL ATTENTION.

#### REGULATORY INFORMATION

#### U.S. REGULATIONS:

INGESTION:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): NOT REGULATED.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): NOT REGULATED.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40). NOT REGULATED.

## SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: NO CHRONIC: NO FIRE: YES REACTIVE: NO

SUDDEN RELEASE: NO

* NA - NOT APPLICABLE

* NE - NOT ESTABLISHED

#### **DISULFIDE OIL SOLUTIONS**

SARA TITLE III SECTION 313 (40 CFR 372.65): NOT REGULATED

OSHA PROCESS SAFETY (29 CFR 1910.119): NOT REGULATED

## PREPARATION DATE

PREPARED BY:

CES TECHNICAL DEPARTMENT

PHONE NUMBER OF PREPARER:

(713) 676-1460

DATE PREPARED (MM/DD/YY): 07/28/08

MINIMUM CONTACT WITH THIS AND ALL CHEMICALS IS RECOMMENDED AS A GOOD GENERAL POLICY TO FOLLOW.

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE AND THE CONDITIONS OF HANDLING AND USE OR MISUSE ARE BEYOND OUR CONTROL, CES ENVIRONMENTAL SERVICES, INC. MAKES NO WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

#### **DISULFIDE OIL SOLUTIONS**

PRODUCT IDENTIFICATION AND USE

MANUFACTURER:

CES ENVIRONMENTAL SERVICES, INC.

4904 GRIGGS ROAD HOUSTON, TX 77021

**EMERGENCY PHONE NUMBER:** 

(713) 676-1460 DISULFIDE OIL

PRODUCT IDENTIFIER:

SULFIDING AGENT

PRODUCT USE

B2 - FLAMMABLE LIQUID.

WHMIS CLASSIFICATION:

D1A - VERY TOXIC MATERIAL CAUSING IMMEDIATE AND

SERIOUS TOXIC EFFECTS

D2B - TOXIC MATERIAL CAUSING OTHER TOXIC EFFECTS

None

HAZARDOUS INGREDIENTS

%W/W CAS#

TLV

DISULFIDE OIL SOLUTIONS

95

ACGIH TWA = 0.5 PPM

WATER

5

(SKIN)

LD50: 290 TO 500 MG/KG (ORAL-RATS)

LD50: >2,000 MG/KG (DERMAL-RATS)

LC50: 1,310 PPM (4-HR. - INHALATION-RATS) NOTE: Mixture of Dimethyl Disulfide, Diethyl

(B) 188

Disulfide, Methyl Ethyl Disulfide

PHYSICAL DATA

PHYSICAL STATE:

LIQUID

**ODOR AND APPEARANCE:** 

GREEN, BROWN, BLACK LIQUID, STRONG PUNGENT ODOR

ODOR THRESHOLD:

8-10 (PPB) SPECIFIC GRAVITY/DENSITY (G/ML): 0.99 - 1.06 @ 20°C

VAPOR PRESSURE:

0.4 PSIA

VAPOR DENSITY (AIR = 1):

3.25

VOLATILITY/VOL (%):

100 **INSOLUBLE** 

SOLUBILITY IN H20: **EVAPORATION RATE** 

NE

**BOILING POINT:** 

105-120°C

FREEZING POINT:

-80°C

PH:

NA

#### SHIPPING INFORMATION

UN 1993, 3, II, DISULFIDE OIL

U.S.DOT 49 CFR 172.101:

PROPER SHIPPING NAME: FLAMMABLE LIQUIDS, N.O.S. (DISULFIDE OIL)

ID NUMBER: UN1993

HAZARD CLASS OR DIVISION: 3

PACKING GROUP: II

LABELING REQUIREMENTS: 3

* NE - NOT ESTABLISHED

^{*} NA - NOT APPLICABLE

#### DISULFIDE OIL SOLUTIONS

FIRE AND EXPLOSION HAZARD

FLAMMABILITY:

**FLAMMABLE** 

CONDITIONS:

HEAT, SPARKS, OPEN FLAMES

MEANS OF EXTINCTION:

WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY

CHEMICAL. WATER MAY BE INEFFECTIVE.

FLASHPOINT:

< 30°C

UPPER EXPLOSION LIMIT (% V):

16 APPROX. 1.1 APPROX.

LOWER EXPLOSION LIMIT (% V): AUTO-IGNITION TEMPERATURE:

300°C (572°F) APPROX.

HAZARDOUS COMBUSTION PRODUCTS:

OXIDES OF CARBON, SULFUR OXIDES, HYDROGEN

**SULFIDE** 

EXPLOSION DATA:

NE

SENSITIVITY TO IMPACT:

NO NO

SENSITIVITY TO STATIC DISCHARGE:

REACTIVITY

CHEMICAL STABILITY:

STABLE

INCOMPATIBLE MATERIALS:

BLEACH, STRONG OXIDIZERS, REDUCING AGENTS, ACIDS

CORROSIVE TO COPPER AND COPPER ALLOYS.

CONDITIONS OF REACTIVITY:

DECOMPOSITION TEMPERATURE: 390°C

HAZARDOUS DECOMPOSITION

HYDROGEN SULFIDE, METHYL MERCAPTAN. CAN REACT

WITH CARBON STEEL TO FORM PYROPHORIC IRON

SULFIDES.

## HEALTH HAZARD INFORMATION

**ROUTE OF ENTRY** 

PRODUCTS:

SKIN CONTACT:

MAY CAUSE IRRITATION

SKIN ABSORPTION:

NE

EYE: INGESTION: MAY CAUSE IRRITATION HARMFUL IF SWALLOWED

INHALATION: HARMFUL IF INHALED

ACUTE OVER EXPOSURE EFFECTS:

CHRONIC OVER EXPOSURE EFFECTS:

NE NE

SENSITIZATION: CARCINOGENICITY:

DOES NOT MEET WHMIS CRITERIA

TERATOGENICITY:
MUTAGENICITY:

DOES NOT MEET WHMIS CRITERIA DOES NOT MEET WHMIS CRITERIA DOES NOT MEET WHMIS CRITERIA

REPRODUCTIVE TOXICITY:

DOES NOT MEET WHMIS CRITERIA

## PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

WEAR SAFETY GOGGLES AND IMPERVIOUS

GLOVES. WHERE AIRBORNE EXPOSURE IS LIKELY.

WEAR A NIOSH APPROVED RESPIRATOR

EQUIPPED WITH AN ORGANIC VAPOR CARTRIDGE.

SPECIFIC ENGINEERING CONTROLS:

LOCAL EXHAUST IS RECOMMENDED.

#### **DISULFIDE OIL SOLUTIONS**

LEAK AND SPILL PROCEDURES: ABSORB SMALL SPILLS WITH SAND. DIKE LARGE

SPILLS AND COVER WITH FOAM OR WATER SPRAY TO REDUCE VAPOR EMISSIONS. TRANSFER TO A CLOSED CONTAINER. TREAT AREA WITH HOUSEHOLD BLEACH TO ELIMINATE ODOR. DO

NOT USE SOLID BLEACH.

WASTE DISPOSAL: HAZARDOUS WASTE. DO NOT ALLOW PRODUCT

TO ENTER THE ENVIRONMENT. CONSULT

FEDERAL OR LOCAL AUTHORITIES FOR APPROVED

DISPOSAL METHODS

HANDLING PROCEDURES AND

STORAGE REQUIREMENTS:

EQUIPMENT:

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES. WASH BEFORE EATING, DRINKING, USING TOBACCO PRODUCTS, OR RESTROOMS. KEEP IN A CLOSED, LABELED CONTAINER IN A

VENTILATED AREA. CONTAINER HAZARDOUS

WHEN EMPTY.

FIRST AID MEASURES

EYE: FLUSH EYES WITH LARGE AMOUNT OF WATER FOR

15 MINUTES WHILE HOLDING EYELIDS OPEN. SEEK

MEDICAL ATTENTION.

SKIN: WASH SKIN WITH WATER AND SOAP, SEEK MEDICAL

ATTENTION IF IRRITATION OCCURS OR PERSISTS.

INGESTION: DO NOT GIVE LIQUIDS IF PERSON IS UNCONSCIOUS OR

VERY DROWSY. DO NOT INDUCE VOMITING. SEEK

IMMEDIATE MEDICAL ATTENTION.

<u>INHALATION</u>: REMOVE PERSON TO FRESH AIR IMMEDIATELY. IF

BREATHING HAS STOPPED, APPLY ARTICIAIAL

RESPIRATION AND ADMINISTER OXYGEN IF NECESSARY.

SEEK MEDICAL ATTENTION.

#### **REGULATORY INFORMATION**

#### **U.S. REGULATIONS:**

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): NOT REGULATED.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): NOT REGULATED.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40): NOT REGULATED.

3

## SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: NO CHRONIC: NO FIRE: YES REACTIVE: NO

SUDDEN RELEASE: NO

* NA - NOT APPLICABLE

* NE - NOT ESTABLISHED

#### **DISULFIDE OIL SOLUTIONS**

SARA TITLE III SECTION 313 (40 CFR 372.65): NOT REGULATED

OSHA PROCESS SAFETY (29 CFR 1910.119): NOT REGULATED

PREPARATION DATE

PREPARED BY:

CES TECHNICAL DEPARTMENT

PHONE NUMBER OF PREPARER:

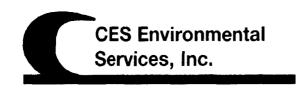
(713) 676-1460

DATE PREPARED (MM/DD/YY):

07/28/08

MINIMUM CONTACT WITH THIS AND ALL CHEMICALS IS RECOMMENDED AS A GOOD GENERAL POLICY TO FOLLOW.

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE AND THE CONDITIONS OF HANDLING AND USE OR MISUSE ARE BEYOND OUR CONTROL, CES ENVIRONMENTAL SERVICES, INC. MAKES NO WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.



## Waste Pre-Acceptance/Approval Letter

Date 2/12/2009

Dear

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3165

Expiration Date 2/12/2011

Generator: Kosovo Government

Address:

### Waste Information

Name of Waste: Oily Water TCEQ Waste Code #: RECYCLE

**Container Type:** 

**Detailed Description of Process Generating Waste:** 

From the rinsing of iso containers containing disulfide oil

Color: dark

**Odor:** slight hydrocarbon

**pH:** 4-10

Physical State: Incompatibilities:

Safety Related Data/Special Handling:

STANDARD PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.







#3/115

4904 Griggs Road Hot Phone: (713) 676-1460 Fax

Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Gener	ator Informat	ion											
Company :	Kosovo Gov	vernment											
Address :													
City, State, Zip :													
Contact :							Title :						
Phone No :							Fax:						
24 / HR Phone :													
U.S EPA I.D No :													
State I.D :							SIC C	ode					
SECTION 2: Billing	Information												
Company :	Kosovo Gov	vernment											
Address :		,											
City, State, Zip:													
Contact :							Title:						
Phone No :							Fax:						
SECTION 3: Genera	al Description	of the Waste											
Name of Waste :	Oily Water												
Detailed Descript	tion of the P	rocess Gen	erating W	/aste:									
From the rinsing o	of iso contain	ers containin	g disulfide	e oil									
Physical State :	<b>v</b> Liqu	id	Sli	udge		Po	wder						
	Solid	d	] Fil	ter Cake	•	☐ Co	mbinati	on					
Color :			dark		Od	lor :				slight	hydroca	ırbon	
Specific Gravity (	(Water=1) :		. 1		De	nsity :				8.34			bs / gal
Does this material	contain any to	otal phenolic	compound	ds?	Ye	es	✓ No	)					
Does this material	contain any p	ara substitute	ed phenoli	c compo	ounds?	Ī	Yes		<b>✓</b> No				
is the Waste subjec	ct to the benze	ene waste op	eration NE	SHAP?	(40 CFR I	Part 61,	Subpart	:FF)		Yes	<b>V</b>	No	
2812 2813 2	2816 2819	2821 282	2 2823	2824	2833	2834	2835	2836	2841	2842	2843	2844	2851
2861 2865 2	2869 2873	2874 287	6 2879	2891	2892	2893	2896	2899	2911	3312	4953	4959	9511
Layers :	Sing	jle-Phas	<b>✓</b> Ma	ulti-Pha	se								
Container Type :	<b>✓</b> Drur	m 🗍	Tote		Truck		Other	(explai	n)				
Container Size :	55ga	al											
Number Of Units	: 5												
Is this a USEPA "I		-				<b>Yes</b> Constituer	✓ N		d hereto				
If "Yes", is it:	D001	D002	D003	.,			01111	accer ict	a rici cto				
A 103 / 13 IC.		_,,											

Characteristic for Toxic N	1etals: <u> </u> D004		D007	
Characteristics for Toxic	Organics: D012 thru D043 (p	lease list all that apply)	e de la companya de l	
Is this an "F" or "K" Liste	d waste or mixed with one?	☐ Yes ✓ No		
If "Yes", then please	ist ALL applicable codes:			
Is this a commercial proc 261.33(e) or (f)?	luct or spill cleanup that woul	ld carry a "U" or "P" wa	ste code under 40 CFR	Yes 🗸 No
If "Yes", then please	list ALL applicable codes:			
Texas State Waste Code	No: RECYCLE			
Proper U.S. State Waste	Code No :	Non-RCRA/No	n DOT regulated oily water	
Class: N/A	UN/NA: N/A	PG:	N/A	RQ: N/A
Flash Point	рН	Reactive Sulfides	Reactive Cyanides	Solids
>140	4-10	BRL mg/l	BRL mg/l	0 %
Oil and Grease >1500ppm mg/l	TOC N/A mg/l	<b>Zinc</b> BRL mg/l	Copper BRL mg/l	<b>Nickel</b> BRL mg/
SECTION 4: Physical and C	hemical Data			
	COMPONENTS TABLE		Concentratio	n Units
The material /	product consists of the foll	owing materials	Ranges are accep	otable or %
	DISULFIDE OIL		5-10	%
	WATER		90-95	%
SECTION 5: Safety Related	Data			
If the handling of this wa	ste requires the use of spec	cial protective equipme	ent, please explain.	
STANDARD PPE				
SECTION 6: Attached Supp				
List all documents, notes	s, data, and/or analysis atta	ched to this form as pa	art of the waste approval pa	ckage.
SECTION 7: Incompatibilitie	se.			
Please list all incompatib				
ricado not an moompani	<b>5</b> ( <b>3</b> )			
SECTION 8: Generator's Kn	owledge Documentation			
Laboratory analysis of the following generators kno		eristics, listed below, \	WAS NOT PERFORMED bas	ed upon the
TCLP Metals :	BRL			
TCLP Volatilies :	BRL			
TCLP Semi-Volatiles :	BRL			
Reactivity :	<u>NON</u>			

Corro	sivity :	NON		
Ignita	bility:	NON		
SECTI	ON 9: Waste Receipt Cl	assification Under 40 CFR 437		
Is this	material a wastewater	or wastewater sludge?	☐ YES	<b>✓</b> NO
If 'YES	S', complete this section	n		
PLEA	SE CHECK THE APP	ROPRIATE BOX: IF NO APP	ROPRIATE	CATEGORY, GO TO THE NEXT PAGE
Matal	s Subcategory: Subj	part A		
	Spent electroplating b	oaths and/or sludges		
	Metal finishing rinse v	vater and sludges		
	Chromate wastes			
	Air pollution control b	ow down water and sludges		
	Spent anodizing solut	ions		
	Incineration wastewat	ers		
	Waste liquid mercury			
	Cyanide-containing w	astes greater than 136 mg/l		
	Waste acids and base	es with or without metals		
	Cleaning, rinsing, and	surface preparation solutions	from electr	oplating or phospha
	Vibratory deburring wa	astewater		
	Alkaline and acid solu	tions used to clean metal part	ts or equipm	nent
	ubcategory: Subp	part B		
	Used oils Oil-water emulsions o	r miyturae		
	Lubricants	i illixtures		
	Coolants			
		water clean-up from petroleur	n sources	
	Used petroleum produ	•	11 3001003	
	Oil spill clean-up			
	Bilge water			
	Rinse/wash waters fro	m petroleum sources		
	Interceptor wastes			
	Off-specification fuels			
	Underground storage	remediation wastes		
	_	etroleum or oily sources		
	Non-contact used glyd	ols		
	Aqueous and oil mixtu	res from parts cleaning opera	itions	
	Wastewater from oil b	earing paint washes		
Organ	ics Subcategory Sub Landfill leachate	part C		
	Contaminated ground	water clean-up from non-petro	leum source	es
	Solvent-bering wastes			
	Off-specification organ	nic product		
	Still bottoms			
}	Byproduct waste glyco	ol		
	Wastewater from pain	t washes		
	Wastewater from adhe	esive and/or epoxies formulati	on	

Wastewater from organic chemical product operations

-[	Tank clean-out from organic, non-petroleum sources	
(1)	If the waste contains oil and grease at or in excess of 100 mg/L, the waste should b	pe classified in the oils subcategory
(2)	If the waste contains oil and grease less than 100 mg/L, and has any of the pollutarexcess of the values listed below, the waste should be classified in the metals subc	
	Cadmium: 0.2 mg/L Chromium: 8.9 mg/L Copper: 4.9 mg/L Nickel: 37.5 mg/L	
(3)	If the waste contains oil and grease less than 100 mg/L, and does not have concentrated above any of the values listed above, the waste should be classified in the	
	☐ Metals Subcatego	
	☐ Oils Subcatego	
	☐ Organics Subcategory	
SE	CTION 10: Additional Instruction	
Chr	you cannot determine the correct subcategory in Section 9 and you did not furnish da iromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial I incentrations. This will be prior to acceptance. The generator will be responsible for the	aboratory a sample to determine these
SEC	CTION 11: Generator's Certification	
abo deli	e information contained herein is based on 🗹 generator knowledge and/or 🗔 ove and attached description is complete and accurate to the best of my knowl liberate or willful omissions of composition properties exist and that all known sclosed. I certify that the materials tested are representative of all materials des	ledge and ability to determine that no or suspected hazards have been
Au	uthorized Signature: NA per Matt Boung	Date:
Pri	inted Name / Title : /	
CE	ES USE ONLY (DO NOT WRITE IN THIS SPACE)	Process Facility Information :
Co	ompliance Officer: Rebuild	\$worked into job already. No Bill
Da	ate: 2-12-09 Status: Approved Rejected	
Αp	pproval Number: HOU-3165	



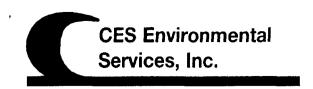
## PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

1. Base Pricing (including freight):
1. Base Pricing (including freight):  The worked into long sing bill. No charge fathere DM's.
2. Contamination Limit (maximum limit before surchages apply):
3. Surcharge Pricing:
4. Special Testing Requirements:
THI .
5. Treatment and Handling Protocol:
6. Treated Wastewater Discharge Subcategory:
☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



## PROCESS FACILITY INFORMATION (CES USE ONLY)!!!

7. Tests for Product Recovered/Recycled (if applicable):						
	!					
8. Management for Product Recovered/Recycled (if applicable)						
8. Management for Product Recovered/Recycled (if applicable)						
8. Management for Product Recovered/Recycled (if applicable)						
8. Management for Product Recovered/Recycled (if applicable)						
8. Management for Product Recovered/Recycled (if applicable)						
8. Management for Product Recovered/Recycled (if applicable)						
8. Management for Product Recovered/Recycled (if applicable)						



## Waste Pre-Acceptance/Approval Letter

Date 3/3/2009

Dear Grace Dean

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3194

**Expiration Date** 3/3/2011

Generator: Arkema, Inc. - Houston

Address: 2231 Haden Road

Houston, TX 77015

Waste Information

Name of Waste: Sulfur Organic liquid

TCEO Waste Code #: Product

**Container Type:** 

**Detailed Description of Process Generating Waste:** 

Producing Mercaptan product

Color: Brown Odor: Storng pH: neutral

**Physical State:** 

Incompatibilities: None Known

Safety Related Data/Special Handling:

Standard PPE. Also use all nessecary safety precautions to handle this stream. It has H2

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

## **CES Environmental** Services, Inc.

CES Environmental Services – Houston Facility 4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-16

Fax: (713) 676-1676

TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900 CES Environmental Services – Port Arthur Facility 2420 S. Gulfway Drive, Port Arthur, TX 77641 Phone: (713) 676-1460 Fax: (713) 676-1676 U.S. EPA ID No: TXR000079307 ISWR No: 88585

SECTION 1: Mate	rial Producer Information	n						
Company:	Arkema, Inc	=	1					
Address:	2231 Haden Road							
City, State, Zip:	Houston, TX 77015							
Contact:	James Wheeland		Title:	Materials Supervisor				
Phone No:	713.450.6767		Fax No:	713-450-9609				
24/hr Phone:	713.304.7037	······································						
U.S. EPA I.D. No:	na							
State I.D.	na		SIC Code:					
SECTION 2: Billin	g Information - Same	as Above						
Company:	Arkema, Inc	us 1kbove						
Address:	200 Market Street							
City, State, Zip:	Philadelphia, PA 19103							
Contact:		Title:						
Phone No:	800.628.4453	Fax No:	215.419.7210					
I MOHE 140.	300.023.4133	Tax No.	213.419.7210					
CICOTRIANIA C	Description 54L - 34	foulal / Dundana	•					
SECTION 3: Gene	ral Description of the Ma	erial / Product						
Name of Matarial /	Draducti Culfie Occasio I	ianid						
	Product: Sulfur Organic I		ial / Dradinate T	Producing Mercaptan product				
Detailed Description	d of Process Generating of	L Liouncing the Mater	iai/Frounct; i	Froducing Mercapian product				
			:					
TO 1 2 C/ 4	[Z] *::	011	1 20					
Physical State:	Liquid $\Box$	Sludge	Powder					
	Solid	Filter Cake	Combination Combination	1				
				·				
Color: Brown	Odor	Strong						
Specific Gravity (w	ater=1): .84 D	ensity: 7.5 lbs/gal	<b>.</b>					
opositio otherity (m	<u> </u>	<b>,</b> - <u></u> <b>9</b>	ŀ					
Door this motorial a	ontain any total phenolic	sampaunds? \( \sqrt{Ves}	⊠ No					
Does this material c	ontain any total phenone	compounds: 🔲 res	△ 110					
Doon this storicl -	antoin any nava aukatitus	ad phanalia sampa	🗆 v. 🗠 🔼	71 No.				
Does this material c	ontain any para substitut	ea phenone compou <b>na</b>	s: LITES K	☑ No				
T	Cinale -base	Mulai - hans	İ					
Layers:	⊠ Single-phase	Multi-phase						
			ļ					
Container Type:	☐ Drum ☐	Tote 🗵	Truck	Other (explain)				
Container Size:			<u>5500 g</u> al					
			ļ	_				
Frequency:	🛛 Weekly 🗌	Monthly $\square$	Quarterly	☐ Yearly				
Number of Units (co	ontainers): 2	Other:						
(								
		-						
Proper U.S. DOT S	hipping Name:	NA1993, Combustible	Liquid, n.o.s. (	Didodecyl sulfide) 3, PG III				
_								
Class: 3	UN/NA:	NA1993	PG: III	RQ: na				
				-				
		1						

Flash Point	pН	N/A	N/A	Solids
>170 F	neutral			0%
Oil&Grease	TOC	Zinc	Соррег	Nickel
<1500mg/l	namg/l	<u>na</u> mg/l	<u>na</u> mg/l	<u>na</u> mg/l

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE  The material / product consists of the following materials	Concentration  Ranges are acceptable	Units	
Didodecyl sulfide	40-55	1 %	
sec -Dodecyl	25-40	%	
n-Dodecyl Mercaptan	<10	%	
Propylene tetramer	<10	%	
tert- Dodecanethiol	<10	%	
See attached additional componets and specs table		1	

## SECTION 5: Safety Related Data

If the handling of this material / product requires the use of special protective equipment, please explain. Standard PPE, also use respirator able to withstand H2S when opening dome lid.

#### SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. MSDS

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any): None known

SECTION 8:	Material I	Producer's (	Certification

	7
The information contained herein is based on   generator knowledge an attached description is complete and accurate to the best of my knowledge and accurate to the best of my knowledge.	edge and ability to determine that no deliberate or willful
omissions of composition properties exist and that all known or suspected	od nazards have been disclosed. I certify that the materials
tested are representative of all materials described by this document.	
Authorized Signature:	Date: 3 3 9
Printed Name/Title: \deliant \de	<del></del>

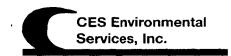
CES USE ONLY (DO NOT WRITE IN THIS SPACE)  Technical Manager:  Date: 3-3-9  Approved Rejected	
Approval Number: 3194	· :

C7 -14 sulfides and disulfides	<10	%
Dodecene	<5	%
Hydrogen Sulfide	<50	ppm

Exhibit A

## **SULFUR ORGANIC LIQUID PRODUCT GENERAL SPECIFICATIONS:**

Specification:	ASTM:	Typical:	Min./Max.
Ash, Wt. %	D-482	<0.01	0.02 Max.
API Gravity	D-287	36.0	35 Min.
Sulfur, Wt. %	D-1552	4.25	4.25 Max.
Pour Point, Deg F.	D-97	100	120 Max.
Oil, %	_	100	99 Min.
Water, %	D-95	0.00	0.5 Max.
Solids, %	D-473 0.00	0.01	0.01Max.
Flash Point, Deg. F.	D-93	>200	140 Min.



## PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1.	Base Pricing (including freight):
	No Payment / No Charge
2.	Contamination Limits (maximum limit before surcharges apply):  Ash < 0.5 % Flashpoint > 170 deg F
	No Solids. must conform with specifications
3.	Surcharge Pricing:
4.	Special Testing Requirements:
	Must pick up pre shipment sample before scheduling load. Run ash and Flash point on sample and check that material is compatible to send to CES Ograno sulfur fuels tank. Once scheduled and trailer is picked up must check H2S in headspace of trailer. Follow sampling SOP to include venting trailer for H2S. must be less than 50 ppm
5.	Treatment and Handling Protocol:
	After we have approved the material as suitable for PEAK, the material must be brought to PACES. You must contact the operations manager before you climb onto the trailer. This is very important. Then we should check the H2S levels by using the personal H2S monitors at the manway level to ensure the levels read less than 50 ppm. If the levels exceed 50 ppm on the personal monitors, we will have to pull a Kevlar bag sample on the headspace and take it to Core or Chemtex and have them perform a sulfur speciation. The levels must show H2S less than 50 ppm to be acceptable.
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



Material Safety Data Sheet

Arkema Inc.

**EMERGENCY PHONE NUMBERS:** 

#### 1 PRODUCT AND COMPANY IDENTIFICATION

Thio and Fine Chemicals

Arkema Inc.

2000 Market Street

Philadelphia, PA 19103

Information Telephone Numbers

Phone Number

Available Hrs

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 767-5089 (24Hrs)

1-800-628-4453

8:30 to 5:30 EST

Product Name

**Customer Service** 

SULFUR ORGANIC LIQUID

Product Synonym(s)

Chemical Family

Mixture

Chemical Formula Chemical Name EPA Reg Num

Product Use

Fuel Oil Cutter Stock

#### 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Didodecyl sulfide	2469-45-6	40-55% By Wt.	Υ
sec-Dodecyl mercaptan	14402-50-7	25-40% By Wt.	Υ
n-Dodecyl mercaptan	112-55-0 •	< 10% By Wt.	Υ
Propylene tetramer	6842-15-5	< 10% By Wt.	Υ
tert-Dodecanethiol	25103-58-6	< 10% By Wt.	Υ
Alkenes, C8-10-branched, C9-rich	97593-01-6	< 10% By Wt.	Υ
C7-14 sulfides and disulfides	NE	< 10% By Wt.	Υ
Dodecene	112-41-4	< 5% By Wt.	Υ
Hydrogen sulfide	7783-06-4	< 50PPM By Wt.	Υ

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

COMPONENTS OF THIS BYPRODUCT ARE NOT ON THE TSCA INVENTORY. THIS BYPRODUCT IS PROVIDED UNDER THE TSCA PREMANUFACTURE NOTICE EXEMPTION AT 40 CFR 720.30(G) ONLY FOR BURNING AS FUEL OR MIXING (NOT REACTING) WITH OTHER MATERIALS FOR BURNING AS FUEL.

#### 3 HAZARDS IDENTIFICATION

**Emergency Overview** 

Brown liquid with strong odor
WARNING!
COMBUSTIBLE LIQUID AND VAPOR.
CAUSES EYE IRRITATION.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

MAY CAUSE NAUSEA, HEADACHE OR DIZZINESS.

Product Code: 000482

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ARKEMA

Material Safety Data Sheet

Arkema Inc.

#### **Potential Health Effects**

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on its composition, it is anticipated to be severely irritating to the eyes and respiratory tract. This material has a strong objectionable odor that may cause nausea, headache, or dizziness. Repeated exposure may cause an allergic skin reaction. Medical conditions which may be aggravated by exposure to this material include lung disease or limited respiratory capacity.

#### 4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention.

IF ON SKIN, immediately wash with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### 5 FIRE FIGHTING MEASURES

#### Fire and Explosive Properties

Auto-Ignition Temperature

NE

Flash Point

>170F

Flash Point Method

Flammable Limits- Upper

Lower

NE NE

#### **Extinguishing Media**

Use water spray, carbon dioxide, foam or dry chemical.

#### Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

#### Fire and Explosion Hazards

None known.

#### 6 ACCIDENTAL RELEASE MEASURES

#### In Case of Spill or Leak

Isolate hazard area and deny entry to unnecessary or unprotected personnel. Contain spilled liquid with sand or earth. Clean up spill immediately, observing precautions in the Personal Protection section of MSDS. Avoid runoff into storm sewers and ditches which lead to waterways.

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ARKEMA

Material Safety Data Sheet

Arkema Inc.

#### 7 HANDLING AND STORAGE

#### Handling

Avoid contact with eyes. Wash thoroughly after handling. Avoid prolonged or repeated contact with skin. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

#### Storage

This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage.

#### 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Engineering Controls**

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

#### Eye / Face Protection

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

#### Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

#### Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

## Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value	
n-Dodecyl mercaptan			
ACGIH Sensitizer Designator	•	Υ	
ACGIH TWA	-	* 0.1 ppm	
Hydrogen sulfide		••	
ACGIH STEL	-	. 15 ppm (21 mg/m3)	
ACGIH TWA	-	10 ppm (14 mg/m3)	
OSHA Ceiling PEL	-	20 ppm	
		• •	

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Material Safety Data Sheet

#### Arkema Inc.

#### tert-Dodecanethiol

Arkema 8-hour TWA

5 ppm

- -Only those components with exposure limits are printed in this section.
- -Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
- -ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
- -WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Brown liquid with strong odor
pH	5 - 7
Specific Gravity	0.84
Vapor Pressure	NE
Vapor Density	NE
Melting Point	85 F
Freezing Point	NE
Boiling Point	NE
Solubility In Water	Insoluble

#### 10 STABILITY AND REACTIVITY

#### Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

#### Incompatibility

There are no known incompatibilities to this product.

#### **Hazardous Decomposition Products**

None known.

#### 11 TOXICOLOGICAL INFORMATION

#### **Toxicological Information**

Data on this material and/or its components are summarized below.

#### n-Dodecyl Mercaptan

Single exposure (acute) studies indicate that this material is slightly toxic to practically non-toxic if swallowed (rat LD50 1,960 - >5,000 mg/kg) or inhaled (rat 4-hr LC50 >8-9 ppm; no deaths following exposure to saturated vapor), no more than slightly toxic if absorbed through skin (rat LD0 >2,000 mg/kg), corrosive to rabbit eyes and severely irritating to rabbit skin (24-hr exposure, PII 8.0/8.0)

Skin allergy was observed in guinea pigs following repeated exposure in some tests, but not others. A potential for irritation and allergic reactions in humans has been reported. Following repeated inhalation exposures, rats and mice exhibited eye, nasal and respiratory tract irritation and breathing difficulties, followed by death which was associated with lung damage. A repeated inhalation exposure study in mice produced microscopic liver changes. Following a longer-term inhalation exposure study, rats showed reduced growth, reduced liver and adrenal function, general congestion of the internal organs and microscopic changes in lungs, liver, kidney,

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ARKEMA

Material Safety Data Sheet

Arkema Inc.

#### 11 TOXICOLOGICAL INFORMATION

heart and brain. No birth defects were observed in the offspring of rats exposed by inhalation during pregnancy, even at amounts which produced significant adverse effects on the mothers. No genetic changes were observed in tests using bacteria or animal cells.

#### Paraffin

This material is neither digested nor absorbed and is considered non-toxic. When ingested, it has been reported to have a mild laxative effect.

#### 12 ECOLOGICAL INFORMATION

#### **Ecotoxicological Information**

Data on this material and/or its components are summarized below.

#### n-Dodecyl mercaptan

This material is practically non-toxic to Daphnia magna, rainbow trout and algae (no effect up to the limit of solubility).

#### **Chemical Fate Information**

Data on this material and/or its components are summarized below.

#### Paraffin

This material is reported to be biodegradable.

#### n-Dodecyl mercaptan

This material is not readily biodegradable (39.2% after 28-days). The log Pow is 6.18

#### 13 DISPOSAL CONSIDERATIONS

#### **Waste Disposal**

Incineration is the recommended method for disposal observing all local, state and federal regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

#### 14 TRANSPORT INFORMATION

DOT Name Non Bulk Domestic/ Bulk and Non bulk international:

Not Regulated

DOT Technical Name DOT Hazard Class

UN Number

DOT Packing Group

PG

RQ

**DOT Special Information** 

Domestic Bulk shipments

Combustible liquid, n.o.s. (Didodecyl sulfide) 3; NA 1993; PGIII

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Material Safety Data Sheet

#### Arkema Inc.

#### 15 REGULATORY INFORMATION

#### Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health Y

Fire

N

Delayed (Chronic) Health N

Reactive

N N

Ν.

Sud

Sudden Release of Pressure

COMPONENTS OF THIS BYPRODUCT ARE NOT ON THE TSCA INVENTORY. THIS BYPRODUCT IS PROVIDED UNDER THE TSCA PREMANUFACTURE NOTICE EXEMPTION AT 40 CFR 720.30(G) ONLY FOR BURNING AS FUEL OR MIXING (NOT REACTING) WITH OTHER MATERIALS FOR BURNING AS FUEL.

#### Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Dodecene	NE	
n-Dodecyl mercaptan	NE	
Hydrogen sulfide	100 LBS	500 LBS
Didodecyl sulfide	NE	
tert-Dodecanethiol	NE	NE
sec-Dodecyl mercaptan	NE	
Propylene tetramer	NE .	NE
C7-14 sulfides and disulfides	NE	NE
Alkenes, C8-10-branched, C9-rich	NE .	NE

#### SARA Title III, Section 302

This product does contain chemical(s), as indicated below, currently on the Extremly Hazardous Substance List, Section 302, SARA Title III. See Section 2 for further details regarding concentrations and registry numbers.

Hydrogen sulfide

#### Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Hydrogen sulfide

tert-Dodecanethiol

## New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List. Hydrogen sulfide

Propylene tetramer

### Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List. Hydrogen sulfide

#### Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List. Hydrogen sulfide

n-Dodecyl mercaptan

n Bodcoyi morodpia

tert-Dodecanethiol

#### **16 OTHER INFORMATION**

Product Code: 000482 Revision: 7 Issued:31 OCT 2006 Page 6 of 7



Material Safety Data Sheet

Arkema Inc.

## **Revision Information**

Revision Date
Supercedes Revision Dated

31 OCT 2006

08-MAR-2006

Revision Number 7

**Revision Summary** 

Revised section 2.

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

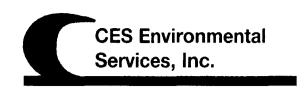
Product Code: 000482 Revision: 7 Issued:31 OCT 2006 Page 7 of 7



## PROCESS FACILITY INFORMATION (CES USE ONLY!!)

/.	See Section 4
	Management for Product Recovered/Recycled (if applicable);
3.	Management for Product Recovered/Recycled (if applicable); See section 5
3.	
3.	
8.	

**pH**: 12



## Waste Pre-Acceptance/Approval Letter

Date 3/10/2009

Dear Accounts Payable- Donna Landry

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # HOU-3201

**Expiration Date** 3/11/2011

**Generator:** T.T. Barge (Mile 183)

**Address:** 7324 Hwy. 405

Donaldsonville, LA 70346

Waste Information

Name of Waste: Spent Sodium Hydroxide Solution

TCEQ Waste Code #: Product

**Container Type:** 

**Detailed Description of Process Generating Waste:** removal of caustic from barge cleaning operations

Color: varies Odor: strong

**Physical State:** 

Incompatibilities: acids

Safety Related Data/Special Handling:

caustic PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.



PHOLIT PACES

4904 Griggs Road, Phone: (713) 676-1 TCEQ Industrial S		2420 76 Pho	) S. Gulfwa ne: (713) 6	y Drive, Po 76-1460	ervices – Port Arthur Facility ort Arthur, TX 77641 Fax: (713) 676-1676 079307 ISWR No: 88585
SECTION 1. Moto	erial Producer Information				
Company:	T.T. Barge (Mile 183)				
Address:	7324 Highway 405				
City, State, Zip:	Donaldsonville, LA 70346				
Contact:	Chuck Metzler	Ti	tle:	E/S	
Phone No:	225-473-8222		x No:	225-473-2	199
24/hr Phone:	800-969-8860				
U.S. EPA I.D. No:	LAD980870794				
State I.D.	D0022	SI	C Code:	NA	
SECTION 2. Billio	ng Information –  Same as Abo	ove			
Company:	T.T. Barge Attn: Accounts Payal				
Address:	19368 Hwy 36				
City, State, Zip:	Covington, LA 70433				
Contact:	Donna Landry	Title:	<del></del>		
Phone No:	225-473-8222		5-473-2199	1	
SECTION 3: Gene	eral Description of the Material /	Product			
	Product: Spent Sodium Hydroxicon of Process Generating or Prod	ucing the Material /	owder		caustic from barge cleaning
	Solid Filte	r Cake 🔲 C	Combinatio	n	
Color: varies	Odor: strong	2			
Specific Gravity (w	vater=1): <u>1.11</u> Density	: <u>9.3</u> lbs/gal			
Does this material	contain any total phenolic compo	ounds? 🗌 Yes 🛛	] No		
Does this material contain any para substituted phenolic compounds?   Yes No					
Layers:	⊠ Single-phase □	Multi-phase			
Container Type: Container Size:	□ Drum □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot     □ Tot	ee 🔲	Truck		Other (explain)
Frequency:	☐ Weekly ⊠ Mo	onthly [	Quarterly	П	Yearly
		•	Qual telly	Ц	i cally
Number of Units (		er:			
Droper HC DOT	Shipping Name: Prud	um Hydroxide Soluti	on		
Proper U.S. DOT S		•	OII		
Class: 8	UN/NA: UN	1824	PG: II		RQ: NA

Flash Point	рН	N/A	N/A	Solids
<u>&gt;150</u>	12			<1°/ ₆
Oil&Grease	TOC	Zinc	Copper	Nickel
<u>O</u> mg/l	<u>O</u> mg/l	<u>0</u> mg/l	<u>O</u> mg/l	<u>O</u> mg/l

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE  The material / product consists of the following materials	Concentration  Ranges are acceptable	Units
Sodium Hydroxide Solution	100	%
		-

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. Standard PPE for handling caustic materails

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any): acids

#### SECTION 8: Material Producer's Certification

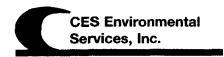
The information contained herein is based on  $\boxtimes$  generator knowledge and/or  $\square$  analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: Chales TML	,	Date: SMAR 09
Printed Name/Title: Churles T. Metzler	E15	

Technical Manager: Lefthe Though	
Date: 3-9-09 Approved Rejected	
Approval Number:	



Γ	On the state of CMM - 1
	Concentration <23% charge \$250.00/load Concentration >23 6 pay customer \$150/dry ton
2.	Contamination Limits (maximum limit before surcharges apply):
	Solids - 5% Floating Hydrocarbons - 5%  Surcharge Pricing:
	XXX 30 m water
3.	Surcharge Pricing:
	XX Xe
4.	Special Testing Requirements:
	Standard sulfidic caustic evaluations for use in the NaSH Production Process: Run full titration, density, percent solids and percent oil via centrifugation, and perform sample acid reaction to ensure normal reaction. Check to ensure oil does not appear post reaction. Check odor, color, and appearance to ensure they are normal. If anything seems abnormal, contact management immediately.
	Complete inbound load report if: either solids or oil exceed 1%, arrangements are made for with customer service regarding customer test for percent solids and oil via centrifugation, pH, density, full titration
5.	Treatment and Handling Protocol:
	Feedstock for NaSH into RV2/RV1. Process through reactor vessel for the recovery of sulfur compounds in the production of NaSH
	Wastewater may either go to System 1 or other wastewater treatment options
6.	Treated Wastewater Discharge Subcategory:
	Subcategory A Subcategory B Subcategory C



7.	Tests for Product Recovered/Recycled (if applicable):
	See above
8.	Management for Product Recovered/Recycled (if applicable);
	See above



# Waste Pre-Acceptance/Approval Letter

Date 3/18/2009

Dear Edwin Anderson

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3222

**Expiration Date** 3/18/2011

**Generator:** Southwest Shipyard **Address:** 18310 Market Street

Channelview, TX 77530

### Waste Information

Name of Waste: Sulfidic Caustic Solution

TCEQ Waste Code #: PRODUCT

**Container Type:** 

Detailed Description of Process Generating Waste:

Processing of fuels using caustic to remove sulfides

Color: Brown to Red Odor: Sulfur / H2S smell pH: 10.5-12.4

**Physical State:** 

Incompatibilities: Metals, Oxidizing agents Safety Related Data/Special Handling:

Chemical suit, rubber gloves, rubber boots, safety goggles, face shield, hard hat

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



CB

Product

CES Environmental Services – Houston Facility 4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676 TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900			<ul> <li>✓ CES Environmental Services – Port Arthur Facility</li> <li>2420 S. Gulfway Drive, Port Arthur, TX 77641</li> <li>Phone: (713) 676-1460 Fax: (713) 676-1676</li> <li>U.S. EPA ID No: TXR000079307 ISWR No: 88585</li> </ul>			
SECTION 1. Materi	ial Producer Information	•				
Company:	Southwest Shipyard, LP					
Address:	18310 Market Street					
City, State, Zip:	Channelview, TX 77530	Λ				
Contact:	George Sladecek	<u> </u>	Title:			
Phone No:	(281) 860-3200		Fax No:	(281) 860	2216	
24/br Phone:	(281) 800-3200	-1	FMX [NO:	(281) 800	-3213	
	17/4		_			
U.S. EPA I.D. No:	N/A					
State I.D.	NA		SIC Code:	NA		
SECTION 2: Billing Company: Address: City, State, Zip:	Information – 🛛 Same	as Aboye				
· · · · · · · · · · · · · · · · · · ·		Tial				
Contact: Phone No:		Title:		٠	<u> </u>	
Phone No:		Fax No:				
	al Description of the Mat					
	roduct: Suflidic Caustic of Process Generating of		erial / Product: )	Processing of	of fuels using caustic to remove	
Physical State:	□ Liquid     □ Solid	Sludge Filter Cake	Powder Combination	n		
Color: Brown to Red	Odor:	Sulfur / H2S smell				
Specific Gravity (wat	er=1): <u>1.03</u> D	ensity: <u>8.6-9.2</u> lbs/gai	ı			
Does this material co	ntain any total phenolic	compounds? 🗀 Yes	No No			
Does this material co	ntain any para substitut	ed phenolic compour	nds? 🗌 Yes 🛛	<b>No</b>		
Layers:	Single-phase	Muiti-phase				
Container Type: Container Size:	Drum _	Tote 5	∑ Truck 5000 gal		Other (explain)	
Frequency: Number of Units (cor	2.	Monthly Other:	Quarterly	Ø	Yearly	
Proper U.S. DOT Shi		Sodium Hydroxide	Solution			
_				. 7.	D.C.	
Class: 8	UN/NA:	UN1824	PG: PG	i II 	RQ:	

Flash Point	рН	N/A	N/A	Solids
N/A	10.5-12.4			0%
Oil&Grease	TOC	Zinc	Copper	Nickel
NAmg/I	NAmg/I	NAmg/I	NAmg/I	NAmg/I

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE  The material / product consists of the following materials	Concentration Ranges are acceptable	Units	
Water	90-95	%	
Sodium Hydroxide	5-10	%	
Solids	0-5	%	

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. Chemical Suit, Rubber Gloves, Rubber Boots, Safety Goggles, Face Shield, Hard Hat

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. MSD8

### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any): Metals, Oxidizing Agents

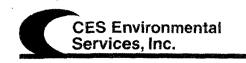
#### SECTION 8: Material Producer's Certification

The information contained herein is based on \( \omega \) generator knowledge an	nd/or analytical data. I hereby certify that the above and
attached description is complete and accurate to the best of my knowle	edge and ability to determine that no deliberate or willful
omissions of composition properties exist and that all known or suspected	ed hazards have been disclosed. I certify that the materials
tested are representative of all materials described by this document.	
$\mathcal{A} = \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A}$	7 17 10

Authorized Signature: Sup Mades Date: 3-17-09

Printed Name/Title: GEORGE SLANGUSK | ENV. MANAGER

CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Technical Manager: Robbut Chyd	
Date: 3-17-00 Approved Rejected	
Approval Number:	



1. Base Pricing (including freight):
304/941- 350° Traus XF5C
Trailer Ainse - 1250 If necessary
2. Contamination Limit (maximum limit before surchages apply):
3. Surcharge Pricing:
notify any of 90 solids it > 390,
4. Special Testing Requirements:
5. Treatment and Handling Protocol:
Part Arthur - Na SIt Prod.
6. Treated Wastewater Discharge Subcategory:
Subcategory A Subcategory B Subcategory C



7. Tests for Product I	Recovered/Recycled	l (if applicable):		
8. Management for P	roduct Recovered/F	Recycled (if appli	cable)	



# **Material Safety Data Sheet** Sodium hydrosulfide solution

MSDS Number 8000TDC (Revised: 02/23/2007)

1:

6 Pages

PAGE 02/07

Section

CHEMICAL PRODUCT and COMPANY IDENTIFICATION

1.1 Product Name ......Sodium hydrosulfide solution

Chemical Family ...... Inorganic salt solution

bisulfide, sodium mercaptan, KI-300

Formula ...... H-Na-S

1.2 

1916 Farmerville Highway

Ruston, Louisiana 71270

Information ......(318) 242-5305

1.3 Emergency Contact ..... (800) 422-6274

(800) 424-9300 (CHEMTREC)

#### Section COMPOSITION, INFORMATION ON INGREDIENTS 2:

2.1 Chemical Ingredients (% by wt.)

Sodium hydrosulfide

Sodium sulfide

Sodium carbonate

Water

CAS #:16721-80-5

CAS #: 1313-82-2

CAS #: 497-19-8

CAS #:7732-18-5

20-45% <1.0% (Typical)

<3.0% (Typical)

54-79%

(See Section 8 for exposure guidelines)

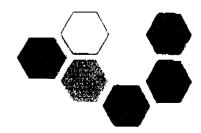
#### Section HAZARDS IDENTIFICATION

NFPA:

Health -

Flammability -

Reactivity -



Section 3: HAZARDS IDENTIFICATION, Cont.

#### **EMERGENCY OVERVIEW**

Warning: Solution is highly alkaline Contains hydrogen sulfide, a highly toxic gas.

Eye contact will cause marked eye irritation and possibly severe corneal damage. Skin contact will result in irritation and possible corrosion of the skin. Ingestion will irritate/burn mouth, throat and gastrointestinal tract. Contact with stomach acid will cause hydrogen sulfide vapors to be released. Heating or acid will cause hydrogen sulfide gas to evolve. Dilution of NaHS with water will also cause increased evolution of hydrogen sulfide.

#### 3.1 POTENTIAL HEALTH EFFECTS

EYE: Contact with the eyes will cause marked eye irritation and possibly severe corneal damage.

**SKIN CONTACT:** Contact with the skin will cause skin irritation or burning sensation. Prolonged contact will result in corrosion of the skin.

SKIN ABSORPTION: Absorption is unlikely to occur.

**INGESTION:** Ingestion will result in severe burning and corrosion of mouth, throat and the gastrointestinal tract. If the ingested material contacts stomach acid, highly toxic hydrogen sulfide gas will be evolved.

**INHALATION**: Product solution and vapors contain highly toxic hydrogen sulfide gas. Exposure to this gas causes, headaches, nausea, dizziness and vomiting. Continued exposure can lead to loss of consciousness and death..

CHRONIC EFFECTS/CARCINOGENICITY:

Not listed as a carcinogen by NTP, IARC or OSHA.

#### Section 4: FIRST AID MEASURES

- **4.1 EYES:** Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye. Obtain immediate medical attention.
- 4.2 SKIN: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain immediate medical attention
- **4.3 INGESTION:** DO NOT INDUCE VOMITING. If victim is conscious, immediately give 2 to 4 glasses of water. If vomiting does occur, repeat fluid administration. Obtain immediate medical attention.
- **4.4 INHALATION:** Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain immediate medical attention.

#### Section 5: FIRE FIGHTING MEASURES

#### 5.1 FLAMMABLE PROPERTIES

FLASH POINT: Not flammable

METHOD USED: NA

Section	5:	FIRE FIGHTING MEASURES, Cont.

- 5.2 FLAMMABLE LIMITS Hydrogen
  - Hydrogen sulfide LFL: 4%

UFL: 44%

- 5.3 EXTINGUISHING MEDIA: Water spray or foam or as appropriate for combustibles involved in fire.
- 5.4 FIRE & EXPLOSIVE HAZARDS: Solution is non-flammable. However if these solutions are exposed to heat or acids, hydrogen sulfide will be released and may form explosive mixtures with air (see above).

Keep containers/storage vessels in fire area cooled with water spray. Heating may cause the release of hydrogen sulfide vapors.

5.5 FIRE FIGHTING EQUIPMENT: Because of the possible presence of toxic gases and the corrosive nature of the product, wear self-contained breathing appearatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### Section 6: ACCIDENTAL RELEASE MEASURES

- **6.1 Small releases:** Isolate for 100 feet. Confine area to qualified response personnel. Wear proper Personnel Protective equipment (See Section 8). Confine release material by berming or diverting its path. Absorb on sand, earth or other inert dry absorbent. Do not allow into sewer, storm drains or any waterway. Oxidize residual reactive sulfides with a weak (3-5%) hydrogen peroxide solution to stop the release of toxic hydrogen sulfide. Remove contaminated soil and dispose of in accordance with all governmental regulations.
- **6.2 Large releases:** Activate Emergency Response Plan procedures, isolate release area for 700 feet. Confine area to qualified response personnel. Wear proper Personnel Protective Equipment (See Section 8). Shut off release, if safe to do so. Dike spill area to prevent runoff into sewers, drains (potential toxic and explosive mixtures of hydrogen sulfide in confined spaces) or surface waterways (potential aquatic toxicity). Recover as much of the solution as possible. Treat remaining material as a small release (above).

#### Section 7: HANDLING and STORAGE

- **7.1 Handling:** Wear proper protective equipment (See Section 8). Avoid breathing product vapors. Avoid contact with skin and eyes. Use only in a well ventilated area. Dilute product only in enclosed containers. Wash thoroughly after handling.
- **7.2 Storage:** Store in well ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures [<80° F (27° C)]. (See Section 10.4 for materials of construction)

#### Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

**8.1 RESPIRATORY PROTECTION:** If working near open container, storage vessel opening or open tank truck dome cover, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent).

2818603215

#### Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION, Cont.

- 8.2 SKIN PROTECTION: Neoprene rubber gloves, chemical sult and boots should be worn to prevent contact with the liquid. Wash contaminated clothing prior to reuse. Contaminated leather shoes cannot be cleaned and should be discarded.
- 8.3 EYE PROTECTION: Chemical goggles and a full face shield.
- 8.4 EXPOSURE GUIDELINES:

**OSHA ACGIH** TWA STEL TLV STEL

Hydrogen sulfide

20 ppm (ceiling)

10 ppm (ceiling)

8.5 ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors. Where feasible scrub process or storage vessel vapors with caustic solution. Maintain eyewash/safety shower in areas where chemical is handled.

#### Section PHYSICAL and CHEMICAL PROPERTIES

9.1 APPEARANCE: May be yellow to red, to dark green to black liquid.

Hydrogen sulfide (rotten egg), hydrocarbon (mercaptan) odor. 9.2 ODOR:

9.3 BOILING POINT: 253 °F(122.8 °C) - 269 °F (131.7 °C)

9.4 VAPOR PRESSURE: 17 mm Hg @ 68 °F (20 °C)

9.5 **VAPOR DENSITY**: (Air = 1.0) 1,17 9.6 SOLUBILITY IN WATER: Complete

9.7 SPECIFIC GRAVITY: 1.152 - 1.303 (9.6 - 10.9 lbs/gal)

9.8 FREEZING POINT: 0° F (-17.8° C) - 20%

56° F (13.3° C) - 45%

9.9 pH:

11.5 - 12.5

9.10 VOLATILE: Not determined

#### Section STABILITY and REACTIVITY 10:

- 10.1 STABILITY: This is a stable material
- 10.2 HAZARDOUS POLYMERIZATION: Will not occur.
- 10.3 HAZARDOUS DECOMPOSITION PRODUCTS: Heating this product will evolve hydrogen sulfide. Fire conditions will also cause the production of sulfur dioxide. Hydrogen sulfide (4-44%) may form flammable mixtures with air. Heating to decomposition emits toxic furnes of sulfoxides and Na₂O
- 10.4 INCOMPATIBILITY: Acids will cause the release of highly toxic hydrogen sulfide. Reacts violently with diazonium salts. Sodium hydrosulfide solution is not compatible with copper, zinc, aluminum or their alloys (i.e. bronze, brass, galvanized metals, etc.). Corrosive to steel above 150° F (65.5° C). These materials of construction should not be used in handling systems or storage containers for this product (SEE Section 7.2, Storage). Dilution of NaHS with water will increase the evolution of hydrogen sulfide. Dilution should be done in an enclosed container.

Section TOXICOLOGICAL INFORMATION 11:

11.1 ORAL: Data not available

03/17/2009 14:34 2818603215

Section 11: TOXICOLOGICAL INFORMATION, Cont.

11.2 DERMAL: Data not available

11.3 INHALATION: INH-RAT LC₅₀: 444 ppm (hydrogen sulfide)

INH-MOUSE LC₅₀: 1,500 mg/m³ 18 minutes INH-RAT LC₅₀: 1,500 mg/m³ 14 minutes

11.4 CHRONIC/CARCINOGENICITY: No evidence available

11.5 TERATOLOGY: Data not available

11.6 REPRODUCTION: Data not available

11.7 MUTAGENICITY: Data not available

Section 12: ECOLOGICAL INFORMATION

Static acute 96 hour-LC₅₀ for mosquito fish is 206 mg/L. (Tl_m - fresh water)

LC₅₀ fly inhalation 1,500 mg/m³, 7 minutes

TL_m Gammarus 0.84 mg/L, 96 hours (hydrogen sulfide)

TL_m Ephemera 0.316 mg/L, 96 hours (hydrogen sulfide)

TL_m Flathead minnow 0.071 ~ 0.55 mg/L @ 6-24°C, 96 hour flow through bioassay (hydrogen sulfide)

TL_m Bluegill 0.0090 - 0.0140 mg/L @ 20-22°C, 96 hour flow through bloassay (hydrogen sulfide)

TL_m Brook trout 0.0216 - 0.0308 mg/L @ 8-12.5°C, 96 hour flow through bioassay (hydrogen sulfide)

Section 13: DISPOSAL CONSIDERATIONS

If released to the environment for other than its intended purpose, this product contains some reactive sulfides which may be in sufficient quantity to meet the definition of a D003, hazardous waste.

Section 14: TRANSPORT INFORMATION

14.1 DOT Shipping Name: Corrosive liquids, toxic, n.o.s.

**14.2 DOT Hazard Class:** 8 (6.1)

14.3 UN/NA Number: UN2922 UN2949 (IMDG - over water)

14.4 Packing Group:

14.5 DOT Placard: Corrosive

14.6 DOT Label(s): Corrosive, Toxic

14.7 IMO Shipping Name: Sodium hydrosulphide solution

14.8 RQ (Reportable Quantity): 5,000 lbs (2268 Kg) 100% basis

[2.604 gal (20%) 1.019 gal (45%)]

Section 14:		SPORT INFORMATION, Cont			
14.9 RR STCC Nun	nber:	26-123-33/49-352-04			
14.10 USCG Codes: Bulk SHR (sodium hydrosulfide solution)  Barge SSI (Sodium sulfide, hydrosulfide solutions, H ₂ S great but less than 200 ppm)					
Section 15:	REGU	LATORY INFORMATION			
15.1 OSHA:		This product is listed as a hazardous m OSHA Hazard Communication Standar		the Federal	
15,2 SARA TITLE II	II: a.	EHS (Extremely Hazardous Substance	) List:	No	
	b.	Section 311/312, (Tier I,II) Categories:	Immediate (acute) Fire Sudden ralease Reactivity Delayed (chronic)	Yes Yes No Yes No	
	C.	Section 313 (Toxic Release Report-For	rm R):	No	
	d.	TPQ (Threshold Planning Quantity):		No	
15.3 CERCLA/SUPI	ERFUND:	RQ (Reportable Quantity)		5,000 lbs (2270 Kg)	
15.4 TSCA (Toxic S	ubstance (	Control Act) Inventory List:		Yes	
15.5 RCRA (Resour	ce Conser	vation and Recovery Act) Status:		D003 (See Section 13	
15.6 WHMIS (Canad	da) Hazard	Classification:		E, D1	
15.7 DOT Hazardou	s Material:	(See Section 14)		Yes	
15.8 CAA Hazardou	is Air Pollu	itant (HAP)		No	
Section 16;		RINFORMATION			
REVISIONS: The		OS was reformatted to comply to ANSI S	tandard Z400.1-		
Revi Revi Revi	sed pH rai sed shippi sed Sectio	ons 1.1, 8.3, 11, 12, 5/7/02 nge in Section 8, 6/19/02 ng info & RQ data, 1/15/03 on 3, Emergency Overview & Section 10. on 2.1, Ingredients & Section 15, added t		ution. 1/23/04	

Revised Section14.10 (added), 15.9 (deleted), USCG shipping codes, 7/21/04.

THE INFORMATION PUBLISHED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN COMPILED FROM OUR EXPERIENCE AND OSHA, ANSI, NFPA, DOT, ERG, AND CHRIS. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THIS

Revised Logo and Emergency contact telephone number, 2/23/07

INFORMATION FOR THE ADOPTION OF NECESSARY SAFETY PRECAUTIONS. WE RESERVE THE RIGHT TO REVISE

MATERIAL SAFETY DATA SHEETS PERIODICALLY AS NEW INFORMATION BECOMES AVAILABLE

4904 Griggs Road Houston TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1460

# **Material / Product Approval Letter**

KIM

Date 3/23/2009

Dear Sal Amato

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3232

**Expiration Date** 3/23/2011

Producer: Sochem

Address:

#### Material / Product Information

Name of Material / Product Sodium hydroxide solution Container Type:

### **Detailed Description of Process Generating or Producing the Material / Product:**

Barge cleanings

Color: brown to red

Odor: none

**pH**: >12

**Physical State:** 

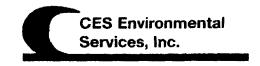
Incompatibilities: acids, oxidizing agents Safety Related Data/Special Handling:

Chem suit, rubber gloves, rubber boots, safety goggles, face shield, hard hat

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.



CES Environme 4904 Griggs Road, I Phone: (713) 676-14 TCEQ Industrial So U.S. EPA ID No: TX	Housto 460 olid W	on, TX 77021 Fax: aste Permit N	(713) 6 o: 309	576-1676 148	2 1	☑ CES Environmental Services – Port Arthur Facili 2420 S. Gulfway Drive, Port Arthur, TX 77641 Phone: (713) 676-1460 Fax: (713) 676-167 U.S. EPA ID No: TXR000079307 ISWR No: 88585			
SECTION 1: Mater	rial Pr	oducer Inforn	nation						
Company:		Chem							
Address:		. Box 1912					·	· · · · · · · · · · · · · · · · · · ·	
City, State, Zip:		nzales, LA				PDR 43			
Contact: Phone No:	Sai	Amato				Title: Fax No:			
24/hr Phone:						FAX INU:			
U.S. EPA I.D. No:	N/.	A							
State I.D.	NA					SIC Code:	NA		
SECTION 2: Billin Company: Address:	g Info	rmation –⊠ §	Same a	s Above					
City, State, Zip:				CO. 1. 1.					
Contact: Phone No:			· · · · · · · · · · · · · · · · · · ·	Title:	-				
Phone No:				Tax No	U				
SECTION 3: Gener						- 1-1			
Name of Material /   Detailed Description	Produ 1 of Pr	ct: Jodiu ocess General	∕^ ′ ting or	hydroxide Producing the M	e 2 Iateri	al / Product: Ba	arge clean	nings	
Physical State:	$\boxtimes$	Liquid		Sludge		Powder			
•		Solid		Filter Cake		Combination			
Color: Brown to Red	ļ	(	Odor:	pore					
Specific Gravity (wa	iter=1	): <u>1,27</u>	De	ensity: <u>10.59</u> lbs/g	al				
Does this material co	ontain	any total phe	nolic c	ompounds? 🗆 Y	es i	⊠ No			
Does this material co	ontain	any para sub	stitute	d phenolic comp	ounds	s? □ Yes ⊠ N	No		
Layers:	$\boxtimes$	Single-phase		☐ Multi-phas	se				
Container Type:		Drum		Tote	$\boxtimes$	Truck		Other (explain)	
Container Size:						4250 gal		-	
Frequency:		Weekly		Monthly		Quarterly		Yearly	
Number of Units (co	ontain	are).	$\overline{}$	Other		- *		•	
		, (	200	and					
Proper U.S. DOT SI	hippin	g Name:	· · · · ·	Sodium Hydroxid	de Sol	lution	·	A	
Class: 8		UN/N	IA:	UN1824		PG: PG I	I	RQ: 100()	

Flash Point	рH	N/A	N/A	Solids
<u>&gt;140</u>	>12			<u>0</u> %
Oil&Grease	TOC	Zinc	Copper	Nickel
NAmg/l	NAmg/I	NAmg/I	NAmg/I	NAmg/I

#### **SECTION 4: Physical and Chemical Data**

COMPONENTS TABLE  The material / product consists of the following materials	Concentration Ranges are acceptable	Units or %	
Sodium Hydroxide	>25	%	
Water	26-75	%	
		<u> </u>	
		l l	

### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. Chemical Suit, Rubber Gloves, Rubber Boots, Safety Goggles, Face Shield, Hard Hat

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile. MSDS

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any):

Acids, Oxidizing Agents

Authorized Signature: _

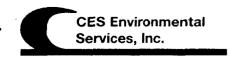
Printed Name/Title: Sal Amato/VP

#### **SECTION 8: Material Producer's Certification**

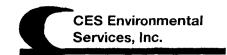
The information contained herein is based on \omega gene	aratar knowledge and/or C	analytical data. I hanaly	contifue that the above and
The information contained herein is based on 22 gene	erator knowledge and/or 🗀 a	maryticai data. Thereby	certify that the above and
attached description is complete and accurate to the	best of my knowledge and	l ability to determine th	at no deliberate or willful
omissions of composition properties exist and that al	I known or suspected hazard	ls have been disclosed.	I certify that the materials
tested are representative of all materials described by t	this document.		
	£		

Date: 3/23/09

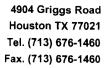
Technical Manager: Carlos SPACE)	
Date: 3-23-09 Approved Rejected	
Approval Number: 3232	
Approval Hamosi.	



1.	Base Pricing (including freight):
	Pricing will be negotiated on a load by load basis. This must be documented in billing comments for each load
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
	Call him with questions
4.	Special Testing Requirements:
	Must test for percent caustic by titration and specific gravity, must have no free floating oil and no solids. THIS MATERIAL MUST BE GREATER THAN 25% CAUSTIC.
į	
5.	Treatment and Handling Protocol:
	Feedstock for NaSH
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);





# **Material / Product Approval Letter**

Date 3/30/2009

Dear Scott Rainey

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3250

**Expiration Date** 3/30/2011

**Producer:** Evergreen Solar

Address: 112 Barnum Road

Devens, MA 01434

Material / Product Information

Name of Material / Product Concentrated acid

**Container Type:** 

#### Detailed Description of Process Generating or Producing the Material / Product:

Silicone wafers are fed through an etch line to be ethced and prepared for solar panel manufacturing. Concentrated acid is a blend of acids that etch the silicone wafer. When bath is spent then the material becomes spent acid.

Color: dark

Odor: slight

**pH**: <2

**Physical State:** 

Incompatibilities: Bases. Please refer to MSDS.

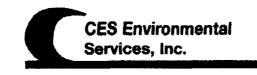
Safety Related Data/Special Handling:

PPE for concentrated acids.

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

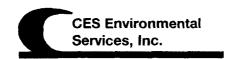
Matt Bowman, President CES Environmental Services, Inc.



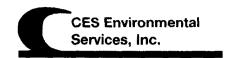
4904 Griggs Road, I Phone: (713) 676-14 TCEQ Industrial So		713) 676-1676 30948	24 Pl	20 S. Gulfw: hone: (713)	ay Drive, Po 676-1460	Services – Port Arthur Facility ort Arthur, TX 77641 Fax: (713) 676-1676 0079307 ISWR No: 88585	
SECTION 1: Mater	rial Producer Informs	ation_					
Сомрану:	Evergreen Solar						
Address:	112 Barnum Road						
City, State, Zip:	Devens, MA 01434						
Contact:	Wayne Wirtanen			Fitle:	EHS Man	ager	
Phone No:	978-266-2292	······································		Fax No:	**************************************		
24/hr Phone:	978-266-2262						
U.S. EPA I.D. No:	MAC300011012			mc			
State I.D.	N/A			SIC Code:		Charles the control of the Control o	
CECTION 4. Dille.	g Information – 🔲 S	ama as Ahawa					
	Hydrocarbon Resourc						
Address:	3306 Poplar Run CT	O ACCOUNTS					
City, State, Zip:	Houston, TX. 77059			<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>			
Contact:	Scott Rainey		Title:	Mgt			
Phone No:	713-724-8595		Fax No:	281-990-9170	6		
SECTION 3: General Description of the Material / Product  Name of Material / Product: Concentrated acid waste (CAW)  Detailed Description of Process Generating or Producing the Material / Product: Silicone wafers are fed through an etch line to be etched and prepared for solar panel manufacturing. CAW is a blend of acids that etch the silicone wafer. When the bath is spent then the material becomes waste. Spent acid.							
Physical State:	⊠ Liquid □ Solid	☐ Sludge ☐ Filter Cal	ke 🔲	Powder Combinatio	on		
Color: dark	o	dor: <u>slight</u>					
1.4 to	1.5	Density: <u>14.5</u>	Ibs/gal				
Does this material c	ontain any total phen	olic compounds	? 🗌 Yes	⊠ No			
Does this material c	ontain any para subs	tituted phenolic	compounds:	? □ Yes [	⊠ No		
Layers:	Single-phase	☐ Mul	ti-phase				
Container Type: Container Size:	Drum	⊠ Tote 330 gali	⊠ on	Truck 5,000 ga		Other (explain)	
·	⊠ Weekly ontainers): <u>50 totes</u>	Product	ther: <u>3-4 tan</u>			Yearly	
Proper U.S. DOT Shipping Name: RQ, Corrosive Liquids, Toxic, N.O.S. (Sulfuric Acid, Hydrofluoric Acid),							

1

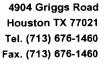
Class: 8, 6.1	UN/NA	: UN2922	PG:	II	RQ:	100lbs
Flash Point N/A	pH <2	N/A	N/A		Solids	
Oil&Grease BDLmg/l	TOC BDLmg/I	Zinc BDLmg/I	Copper BDLmg/	Nickel BDLm		
SECTION 4: Physics			· · · · · · · · · · · · · · · · · · ·	21200.00000.5145400000000	gaçi	7
The meteric	<u>COMPONENTS</u> L/product consists of	TABLE f the following materi	ole	Concentration Ranges are accept		Units or %
Sulfuric Acid	17 product consists o	the tollowing materi	<b>613</b>	75-85%		<del>%</del>
Nitric Acid				1-5%		%
Hydrofluoric Acid				1-2%		<del>%</del>
Water				1-10%		<del>%</del>
AAGIGI				1-10/0		70
						****
SECTION 5: Safety  If the handling of this Please see MSDS  SECTION 6: Attach  List all documents, no SECTION 7: Incomp.  Please list all incomp.	material / product PPC for Conced Supporting Documents, data, and/or and	centated ac	· <b>(</b> 5 .			ie.
Please see MSDS		/				
SECTION 8: Materi		· · · · · · /				
The information conta attached description is omissions of composit tested are representativ Authorized Signature	s complete and accur tion properties exist a ve of all materials desc	rate to the best of my and that all known or s cribed by this documen	knowledge assuspected haza	nd ability to determi	ine that no sed. I cert	deliberate or willful
Printed Name/Title:	EMUTICONME	ental affairs	MANAGER			
CES USE ONLY (DO NO	<i>^</i>	JE)				
Technical Manager:	Lablutte	7dh				
Date: 3-30-20	Appro	oved Rejected				
Approval Number:	3250		}			

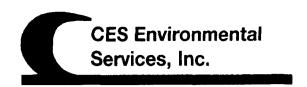


1.	Base Pricing (including freight):
	\$0.65/gallon + freight + FSC
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
•	
4.	Special Testing Requirements:
5.	Treatment and Handling Protocol:
	To be used in the Nast Process
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);





# **Material / Product Approval Letter**

Date 3/30/2009

Dear Scott Rainey

Thank you for choosing CES Environmental Services, Inc. for your material / product recycling needs. The following material has been approved at our facility in Houston, TX. If the material received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3250

Expiration Date 3/30/2011

**Producer:** Evergreen Solar

Address: 112 Barnum Road

Devens, MA 01434

Material / Product Information

Name of Material / Product Concentrated acid

**Container Type:** 

#### **Detailed Description of Process Generating or Producing the Material / Product:**

Silicone wafers are fed through an etch line to be ethced and prepared for solar panel manufacturing. Concentrated acid is a blend of acids that etch the silicone wafer. When bath is spent then the material becomes spent acid.

Color: dark

Odor: slight

**pH**: <2

**Physical State:** 

**Incompatibilities:** Bases. Please refer to MSDS.

Safety Related Data/Special Handling:

PPE for concentrated acids.

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

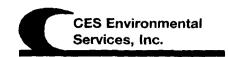
# **CES Environmental** Services, Inc.

CES Environmental Services — Houston Facility 4904 Griggs Road, Houston, TX 77021 Phone: (713) 676-1460 Fax: (713) 676-1676 TCEQ Industrial Solid Waste Permit No: 30948 U.S. EPA ID No: TXD008950461 ISWR No: 30900				2420 S. Gulfw Phone: (713)	ay Drive, F 676-1460	Services – Port Arthur Facility Ort Arthur, TX 77641 Fax: (713) 676-1676 0079307 ISWR No: 88585	•
SECTION 1. Mate	rial Producer Inform	ation					
Company:	Evergreen Solar	1441411					
Address:	112 Barnum Road			***************************************	······································		-
City, State, Zip:	Devens, MA 01434	1.			****		-
Contact:	Wayne Wirtanen	T		Title:	EHS Mai	19 <i>0</i> AT	-
Phone No:	978-266-2292	<del></del>		Fax No:		14 <u>6</u> V1	_
24/hr Phone:	978-266-2262		<del></del>	I AM ITO			-
U.S. EPA I.D. No:	MAC300011012			=			
State LD.	N/A			SIC Code:			
State LD.	IVA	**************************************	****	Sic Coue:			130
SECTION 2: Billin Company: Address:	Ig Information - S Hydrocarbon Resour 3306 Poplar Run CT				***************************************		-
City, State, Zip:	Houston, TX. 77059	<del></del>		***************************************	***************************************		
Contact:	Scott Rainey		Title:	Mgt			-
Phone No:	713-724-8595	<del></del>	Fax No:	281-990-9170	5		-
	ral Description of the						-
Detailed Description be etched and prepare	Product: Concentrate of Process Generated for solar panel management of the process of the product of the produ	ing or Producing oufacturing, CAV	g the Mater V is a blend	inl/Product: of acids that eta Ted aud	Silicone wash the silicon	fers are fed through an etch line ne wafer. When the bath is spen	<u>to</u> ţ
Physical State:	∠ Liquid	Sludge		Powder			
•	☐ Solid	☐ Filter Cal	ke [	Combinatio	n		
		Inter Car	- L	) Combinatio	41		
Color: <u>dark</u>	(	<b>Od</b> or: <u>slight</u>					
1.4 to	1.5	Density: <u>14.5</u>	lbs/gal				
Does this material o	ontain any total phe	nolic compounds	s? 🗌 Yes	⊠ No			
Does this material o	ontain any para subs	tituted phenolic	compound:	s? Yes	⊠ No		
Layers:	Single-phase	☐ Mul	ti-phase				
Container Type:	☐ Drum	☐ Tote	$\boxtimes$	Truck		Other (explain)	
Container Size:	<del> </del>	330 galle	<u>on</u>	<u>5.000 ga</u>			
Frequency:	⊠ Weekly	☐ Monthly		Quarterly		Yearly	
Number of Units (c	ontainers): <u>50 totes</u>	O	ther: <u>3-4 ta</u>	- •		•	
·	-						
Proper U.S. DOT S	hipping Name:	Product RQ, Corre	osive Liquid	s, Toxic, N.O.S	S. (Sulfuric	Acid, Hydrofluoric Acid),	
		-					

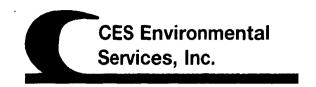
Class: 8, 6.1	UN/N	NA: UN2922	PG:	II	RQ	: 100lbs	
Flash Point	pH	N/A	N/A		Solids		
N/A	<2				<1%		
Oil&Grease BDLmg/l	TOC BDLmg/I	Zinc <u>BDL</u> mg/I	Copper BDLmg/		lickel BDLmg/I		
DOLING	DULME	DOCUME!	DOLLER	<u> </u>	<u></u>		
SECTION 4: Physic	SECTION 4: Physical and Chemical Data						
	CONTROCIBOR	ISMANBAD		Conceni	ti-ation	Units	
	l / product consists	s of the following material	s	Ranges are		or %	
Sulfuric Acid				75-85%		%	
Nitric Acid				1-5%		%	
Hydrofluoric Acid				1-2%		%	
Water				1-10%		%	
SECTION 5: Safety Related Data  If the handling of this material / product requires the use of special protective equipment, please explain.  Please see MSDS . PPE for Concentrated acids.  SECTION 6: Attached Supporting Documents  List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.  SECTION 7: Incompatibilities  Please list all incompatibilities (if any):  Please see MSDS  SECTION 8: Material Producer's Certification  The information contained herein is based on I generator knowledge and/or analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials							
Authorized Signature: Name Watchen Date: 3/13/09							
Printed Name/Title:ENVIRONMENTAL AFFAIRS MANAGER							
CES USE ONLY (DO NO	T WRITE IN THIS SP	ACE)					
Technical Manager:	Kabhu ET	typh					
Date: 3-30-20							
Approval Number:	3250						



1.	Base Pricing (including freight):
	\$0.65/gallon + freight + FSC
ļ	
2.	Contamination Limits (maximum limit before surcharges apply):
3.	Surcharge Pricing:
i	
4.	Special Testing Requirements:
i	
:	
5.	Treatment and Handling Protocol:
	To be used in the NasH Process
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable);



# Waste Pre-Acceptance/Approval Letter

Date 4/8/2009

Dear Ricardo Salias

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3263

Expiration Date 4/8/2011

**Generator:** GATX (Hearne) **Address:** 1401 W. Brown St.

Hearne, TX 77859

#### Waste Information

Name of Waste: Sodium Sulfide Solution

TCEO Waste Code #: Product

**Container Type:** 

**Detailed Description of Process Generating Waste:** 

heel from railcars prior to cleaning RCRA empty containers

Color: amber, brown Odor: pungent, rotten egg pH: >11

**Physical State:** 

Incompatibilities: mineral acids, strong oxidizers, chlorine, aluminum, copper, and

brass alloys

Safety Related Data/Special Handling:

caustic PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.

# **CES Environmental** Services, Inc.

4904 Griggs Road Phone: (713) 676-1460

Houston, TX 77021 Fax: (713) 676-1676

http://www.cesenvironmental.com TCEQ Industrial Solid Waste Permit No: 30948

U.S. EPA ID No: TXD008950461

**ISWR No: 30900** 

DC/MM Product

SECTION 1: Mater		nation					
Company:	GATX Rail					·	
Address:	1401 W. Brown St						
City, State, Zip:	Hearne, TX 77859				70:41	Mainton	Managar
Contact:	Ricardo Salias				Title:		nnce Manager
Phone No:	979-279-3481				Fax No:	(979) 279	9-3020
24/hr Phone:	979-220-2450						
U.S. EPA I.D. No:	TXD000835207				CIC C I		
State I.D.	32643				SIC Code:		
SECTION 2: Billing	g Information – 🔀 S	Same as	Above				
Company:							
Address:						···	
City, State, Zip:						·	
Contact:			Title:	_			
Phone No:			Fax No:	: _			
SECTION 3: Gener	al Description of the	<u>Materi</u>	ial / Product				
Name of Material / P Detailed Description empty containers				iteri:	al / Product: ]	heel from ra	ailcars prior to cleaning RCRA
Physical State:	□ Liquid     □ Solid		ludge ilter Cake		Powder Combination	n	
Color: amber, brown	C	dor: pu	ngent, rotten egg				
Specific Gravity (wat	ter=1): <u>1</u>	Dens	ity: <u>8.34</u> lbs/gal				
Does this material co	ntain any total pher	olic con	npounds? 🔲 Y	es	⊠ No		
Does this material co	ntain any para subs	tituted p	phenolic compo	ındsʻ	? 🗌 Yes 🛛	☑ No	
Layers:	<b>⊠</b> Single-phase	[	Multi-phase				
Container Type:	□ Drum		Гote		Truck		Other (explain)
Container Size:	<del></del> -					_	
		_					
Frequency:	☐ Weekly	× N	Monthly	П	Quarterly	П	Yearly
•	~	(A) 1	-		Quarterry	ப	rearry
Number of Units (cor	itainers): 🗇 -   V		Other:				
		Prol	duct		And the last		Colonida para para para para para para para pa
Proper U.S. DOT Shi	ipping Name:		odium Sulfide So	lutio	n	2 100	1
Class: 8	UN/NA	<u> </u>	N1760		PG: II	eliquio	
C1a55. 0	UN/INA	<b>1.</b> U	141/00		rg. II		RQ: 833 gallons

Flash Point >140	pH >11	N/A	N/A	Solids 0%
Oil&Grease	TOC	Zinc	Copper	Nickel
namg/l	namg/l	namg/l	<u>namg/l</u>	namg/l

### SECTION 4: P vsical and Chemical Data

	COMPONENTS WEED		Links
The m	terial / product consists of the following materials	Ranges are acceptable	or %
water		88-93	%
sodium sulfide		0-12	%
sadium hydrox	le	0-12	1%
mixed alkyl sul	des	<1	%
mixed disulfide	i	<1	%
mixes alkyl me	captons	<1	%

SECTION	5: 5	ifety	Related	Date

If the handling of this material / product requires the use of special protective equipment, please explain.

### SECTION 6: ttached Supporting Documents

List all docume its, notes, data, and/or analysis attached to this form as part of the material / product profile. MSDS

### SECTION 7: acompatibilities

Please list all it compatibilities (if any):

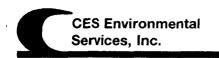
mineral acids, s one oxidizers, chlorine, aluminum, copper, and brass alloys

#### SECTION 8: Interial Producer's Certification

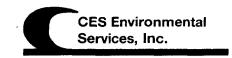
The informatio contained herein is based on generator knowledge and/or analytical data. I hereby certify that the above and attached descrition is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Siz sature:			Date: 4/3/9
Printed Name litle:	<b>Y</b> -	hicardo Salias	

Technical Man ger: Policy Rejected  Date: 4-8-19  Approved Rejected	
Approval Num er: PA - 3263	



1.	Base Pricing (including freight):
	\$250/deum
2.	Contamination Limits (maximum limit before surcharges apply):
	Solids: = 5%
	W100: 5-0/6
3.	Surcharge Pricing:
<i>J</i> .	
	Carl Sales rep
4.	Special Testing Requirements:
	Full theather, percent solids, test for use in Naths production
	Ten personal senses, rest top according production
5.	Treatment and Handling Protocol:
э.	
	Use in Nails production
6.	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C



Tests for Product Recovered/Recycled (II applicable):				
NA				
Management for Product Recovered/Recycled (if applicable);				
NA				



REVIS	ION 4: February 26, 2008 MA	ATERIAL SAFET	Y DATA SHEET	Page 1/6			
1	IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY						
1.1	Identification of the Product:	SODIUM S	SODIUM SULFIDE SOLUTION				
1.2	Product Code:	SSREF					
1.2	Company:	5455 Old 9	Merichem Chemicals & Refinery Services LLC 5455 Old Spanish Trail Houston, TX 77023, U.S.A.				
1.3	Transportation Emergency:	USA	800-424-9300 (CHEMTREC)				
1.4	Product Information:	713-428-50 713-926-36					

2	COMPOSITION/INFORMATION ON INGREDIENTS						
	<u>Substance</u>	CAS No.	% Present	Symbol(s)	R-Phrases		
	Water	7732-18-5	88 - 93	-	-		
	Sodium Sulfide	1313-82-2	0 - 12	C, N	31, 34, 50		
	Sodium Hydroxide	1310-73-2	0 - 12	C	34		
	Mixed Alkyl/Aryl Sulfides	_	<1	-	-		
	Mixed Disulfides	68334-01-0	<1	-	-		
	Mixed Alkyl/Aryl Mercaptans	-	<1	-	-		

#### 3 HAZARDS IDENTIFICATION

May be corrosive to the skin, eyes and respiratory tract.

May cause burns to the skin and eyes (effects may be delayed).

May be harmful if swallowed, inhaled or absorbed the through the skin.

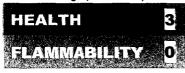
Aspiration hazard if swallowed (can enter lungs and cause damage).

Noxious odors due to Sulfides, Disulfides and Mercaptans are typically present in the vapour space of closed containers, barges, tanks, etc.

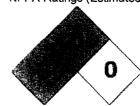
Will react with mineral acids liberating Hydrogen Sulfide in concentrations that may be harmful or fatal.

Will react with mineral acids liberating Hydrogen Sulfide in concentrations that may result in a flammable atmosphere. Small upper petroleum hydrocarbon layer/film with a flash point of less than 100°F may be present resulting in a potential fire hazard. However, material is not considered flammable or combustible for the purpose of meeting Hazard Communication requirements.

HMIS Ratings (Estimated)



NFPA Ratings (Estimated)



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#### MATERIAL SAFETY DATA SHEET

Page 2/6

#### SODIUM SULFIDE SOLUTION (SSREF)

#### 4 FIRST-AID MEASURES

In case of swallowing:

Do not induce vomiting. If victim is alert and not convulsing, rinse mouth with water or milk and give three or more glasses of water or milk to drink. If spontaneous vomiting occurs, have affected person lean forward with head down to avoid breathing of vomitus. Rinse mouth again and give more water or milk to drink. Obtain medical

attention.

In case of inhalation:

Remove affected person to fresh air. Provide oxygen if breathing is difficult. Give artificial respiration only if breathing has stopped and obtain immediate medical

attention. Obtain medical attention if respiratory tract irritation develops.

In case of contact with eyes:

Promptly flush eyes with running water for 15 minutes, including under eyelids.

Obtain medical assistance.

In case of contact with skin:

Promptly remove contaminated clothing and thoroughly wash exposed area with soap and water. Continue to flush exposed area with water. Seek medical assistance if

irritation or other symptoms develop.

#### 5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

Suitable

 Dry chemical, CO₂ or foam is recommended should fire result from petroleum hydrocarbon layer. Water spray may be used

to cool or protect containers exposed to fire or heat.

Not suitable - Water spray may be ineffective in extinguishing fire resulting

from petroleum hydrocarbon layer.

5.2 Fire exposure hazards:

May release Hydrogen Sulfide when heated.

5.3 Personal protective equipment:

Wear Self Contained Breathing Apparatus and protective clothing appropriate for fire-fighting. Non-emergency personnel should be removed from the area

immediately.

#### 6 ACCIDENTAL RELEASE MEASURES

Remove non-essential personnel from the area. Shut off ignition sources.

Observe any container warning labels (See Sections 14 and 15). Take precautions to avoid exposure (See Section 8).

Promptly contain any spilled material with dry agent (sand, vermiculite, etc.). Shovel agent and absorbed material into labelled container(s) for proper disposal (See Section 13).

#### 7 HANDLING AND STORAGE

7.1 <u>Handling</u>: Handle/weigh this material under conditions of good local exhaust ventilation.

Avoid breathing mist or aerosol, swallowing, and eye and skin contact.

Wear personal protective equipment (See Section 8).

Wash thoroughly after handling.

7.2 Storage:

Store in compatible, sealed container.

Store in a clean, dry, well-ventilated area away from heat, direct sunlight, hot metal surfaces, sources of ignition and mineral acids.

Keep containers tightly closed.

#### SODIUM SULFIDE SOLUTION (SSREF)

8	EXPOSURE CONTROLS/PERSONAL PROTECTION						
8.1	Respiratory:		nt exposu	ire above r	egulatory lev	els (see Sect	dusts that may be formed during ion 16). A full-facepiece, SCBA is
8.2	<u>Hand</u> :	Heavy PVC or butyl ru gauntlets	bber glov	es or 8.	3 <u>Eye</u> :	Goggles o combinatio	r safety glasses/side shields in n with face shield.
8.4	<u>Skin</u> :	Proper work attire (i.e apron, lab coat or cove		eeve shirt,	long pants,	work shoes).	. Conditions may also call for an
9	PHYSICAL ANI	D CHEMICAL PROPER	RTIES				
9.1 <u>Ap</u>	pearance:	Amber, Brown Liq	uid	9.2 <u>Odo</u>	<u>ır</u> :		Pungent, Rotten Egg
<u>Hq</u> 8.9		>11.0		9.4 Boilir	ng Pt./range:		104°C (220°F), Approximately
9.5 <u>Fre</u>	ezing Pt./Range:	0.5°C (33°F), App	roximatel	У			
9.6 <u>Fla</u>	sh point:	Aqueous Solution <37.8°C (100°F))	, Not Fla	mmable.	(If present, p	petroleum hyd	drocarbon layer has a flash point
9.7 <u>Fla</u>	mmability:	See 9.6		9.8 <u>Autor</u>	lammability:		See 9.6
9.9 <u>Ex</u>	olosive properties	: Not Explosive		9.10 <u>Oxic</u>	izing proper	ties:	Not an oxidizer
9.11 <u>Va</u>	por pressure:	Not Applicable		9.12 <u>Rela</u>	tive density	$(H_2O = 1)$ :	1.15 - 1.18 @ 15.6°C (60°F)
9.13 <u>Bu</u>	lk density:	See 9.12					
9.14 <u>So</u>	<u>lubility</u> :	Water Fat (type) Other solvents	- Not	ieous Solu determine determine	d		
9.15 <u>Pa</u>	rtition coefficient:	Log P _{o/w} (Octan	ol/water)	- No	t determined	ŀ	
9.16 <u>Ot</u> l	her data:	Odor Threshold	= <1 ppm				
10	STABILITY AND	O REACTIVITY					
10.1	Conditions to av	<u>void</u> :	High ten	nperatures	and possible	e sources of i	gnition.
10.2	Materials to avo	o <u>id</u> :	Mineral alloys.	acids, stro	ng oxidizing	agents, chlor	ine, aluminium, copper and brass
10.3	Hazardous deco	omposition products:	Oxides	of carbon r	nay be relea	sed on burnin	g or heating to decomposition.

#### SODIUM SULFIDE SOLUTION (SSREF)

#### 11 TOXICOLOGICAL INFORMATION

Acute:

Irritant or corrosive in contact with body tissues.

Mist or aerosol is respiratory tract irritant and possibly harmful and systemic poison if inhaled.

Harmful if swallowed possibly causing severe irritation and burns of the mouth, throat and digestive tract followed by delayed effects of abdominal pain and nausea.

If released due to heating, etc., Hydrogen Sulfide vapors may cause headache, dizziness, nausea and vomiting. Prolonged exposure to elevated levels of Hydrogen Sulfide can lead to loss of consciousness, respiratory failure and death.

<u>CAS Number</u> 1313-82-2	Dermal LD ₅₀	<u>Oral LD₅₀</u> 208 mg/kg, Rat 205 mg/kg, Mouse	Inhalation LC ₅₀
1310-73-2	-	-	-
Sulfides (as Methyl Sulfide)	>5 gm/kg, Rabbit	3300 mg/kg, Rat 3700 mg/kg, Mouse	31620 ug/m³, Mouse
Disulfides (as Methyl Disulfide)	<b>-</b>	535 mg/kg, Rat	15850 ug/m³/2H, Rat 12300 ug/m³/2H, Mouse
Mercaptans (as Methyl Mercaptan)	<u>-</u>	682 mg/kg, Rat	4420 ppm/4H, Rat 2770 ppm/4H, Mouse

Chronic:

Product and components are not listed by NTP, IARA or OSHA as carcinogens.

Product is unlikely to be a skin sensitizer.

#### 12 ECOLOGICAL INFORMATION

The aquatic toxicity of this product has not been determined. One component, Sodium Hydroxide, is considered highly toxic to aquatic life (Bluegill LC₅₀ = 250 ug/L, 96 H). Avoid direct or indirect discharge to bodies of water.

#### 13 <u>DISPOSAL CONSIDERATIONS</u>

Generators of waste material are responsible for evaluating materials for compliance with all applicable procedures and regulations. Disposal of unused materials must be in accordance with all local, state and federal regulations. Containers should be cleaned of residual product and rinsed according to all local, state and federal regulations prior to disposal.

#### 14 TRANSPORT INFORMATION

IATA Proper Shipping Name: Corrosive liquid, n.o.s., (Sodium Sulfide Solution)

DOT Proper Shipping Name: Corrosive liquids, n.o.s., (Sodium Sulfide Solution)

UN No.: 1760

Symbol:

Hazard Class: 8
Packing Group: II
Marine Pollutant: No



Hazardous Substance: This product contains Sodium Hydroxide (RQ = 1000 lbs) which is listed in 49 CFR 172.101, Appendix A as a Hazardous Substance. Solution RQ = 8,333 pounds (846 gallons) at 12% concentration.

#### SODIUM SULFIDE SOLUTION (SSREF)

#### 15 REGULATORY INFORMATION

Components listed as "dangerous" in Annex I to Directive 67/548/EEC (8)

R31

Component or impurityAnnex I NumberSodium Sulphide016-009-00-8Sodium Hydroxide011-0023-00-6

Classified according to the Directives 67/548/EEC and 88/379/EEC, and their various amendments, and labeled:

**Sodium Sulfide Solution (SSREF)** 

Contains Sodium Sulphide (EC No. 215.211.5) and Sodium Hydroxido (EC No. 215.185.5).

Sodium Hydroxide (EC No. 215-185-5)

Warning symbol:



Warning words:

Sodium Sulphide

Corrosive

Contact with acid liberates toxic gas.

Risk phrases:

	R34 R50	Causes burns. Very toxic to aquatic organisms.
Sodium Hydroxide	R35	Causes severe burns.
Safety phrases:		
Sodium Sulphide	S1/2 S26	Keep locked up and out of reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	S61	Avoid release to the environment.
Sodium Hydroxide	S1/2	Keep locked up and out of reach of children.
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	\$37/39 \$45	Wear suitable gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

REVISION 4: February 26, 2008	MATERIAL SAFETY DATA SHEET	Page 6/6
	SODIUM SULFIDE SOLUTION (SSREF)	

OTHER INFORMATION					
Occupational Exposure Levels					
Sodium Hydroxide	US (OSHA) US (ACGIH) US (NIOSH)	2 m	g/m ³ , 8-hour TWA g/m ³ , Ceiling ng/m ³ , IDLH		
Dimethyl Sulfide (Reference)	US (ACGIH)	10 p	pm, 8-hour TWA		
Ethyl Mercaptan (Reference)	US (OSHA) US (ACGIH) US (NIOSH)	0.5	ng/m³ (10 ppm), Cei opm, 8-hour TWA ppm, IDLH	ling	
SARA Title III Information	Sec 302 CERCLA RQ (pounds)	Sec 302 EHS TPQ (pounds)	Sec 311/312 Category	Sec 313 Toxic Chemical	Sec 313 Category
Product	8333 (Max)		Acute		
Sodium Sulfide			Acute Reactive		
Sodium Hydroxide	1000		Acute Reactive		
WHMIS:	<u>CAS N</u> 1313- 1310-	82-2	Rating E, D1B E		
Inventories:	<u>CAS N</u> 1313- 1310- 7732- 68334	82-2 73-2 18-5	TSCA DSL Yes Yes Yes Yes Yes Yes Yes Yes		<u>NECS</u> Yes Yes Yes Yes

Intended Uses:

For industrial use only. No other use is intended.

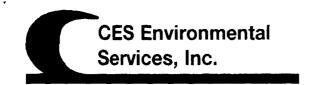
Revisions:

16

Revisions are indicated by 20% shading.

The format of this Safety Data Sheet conforms to the requirements of EC Directive 91/155/EEC.

The information on this form is furnished solely for the purpose of enabling those who transport, handle or use our products to ensure the safety and health of their employees and to comply with various laws and regulations (federal, state and local). This information is offered in good faith and is believed to be accurate. Merichem Chemicals & Refinery Services LLC, however, makes no guarantee or warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use hereof.



## Waste Pre-Acceptance/Approval Letter

Date 4/14/2009

Dear Ruben Fernandez

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3273

Expiration Date 4/14/2011

**Generator:** Dana Container **Address:** 902 Sens Road

La Porte, TX 77572

Waste Information

Name of Waste: Caustic Heels
TCEQ Waste Code #: PRODUCT

**Container Type:** 

**Detailed Description of Process Generating Waste:** Removal of heels from corrosive trailer prior to cleaning.

Color: varies Odor: mild pH: >12.5

**Physical State:** 

Incompatibilities: Metals, Oxidizing Agents Safety Related Data/Special Handling:

Chemical Suit, Rubber Gloves, Rubber Boots, Safety Goggles, Face Shield, Hard Hat

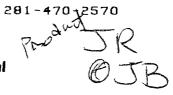
If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President CES Environmental Services, Inc.







4904 Griggs Road, Phone: (713) 676-1 TCEQ Industrial S	ental Services - Housto Houston, TX 77021 1460 Fax: (7: folid Waste Permit No: XD008950461 ISWR N	13) 676-1676 30948	<ul> <li>         ⊠ CES Environmental Services – Port Arthur Facility     </li> <li>2420 S. Gulfway Drive, Port Arthur, TX 77641     </li> <li>Phone: (713) 676-1460         <ul> <li>Fax: (713) 676-167</li> </ul> </li> <li>         U.S. EPA ID No: TXR000079307 ISWR No: 88585     </li> </ul>			
SECTION 1: Mate	erial Producer Informa	tion				
Company:	Dana Container					
Address:	902 Sens Road	-				
City, State, Zip:	La Porte, TX 77571					
Contact: Phone No:	Julio Cuellar		Title: _	(201) (70	0.570	
24/br Phone:	(832) 362-8676		_ Fax No: _	(281) 470-	-2370	
U.S. EPA I.D. No:	TXR000011155		_			
State I.D.	41563		SIC Code:	NA		
SECTION 2: Billin Company: Address:	ng Information – X Sa Dana Container PO Box 1023	me as Above				
City, State, Zip:	La Porte, TX 77572					
Contact:	Ruben Fernandez	Title:				
Phone No:	(281) 471-4700	Fax No:	(281) 470-2570	<u> </u>		
SECTION 3: Gene	ral Description of the N	Material / Product				
	Product: <u>Caustic Heels</u> n of Process Generating		erial / Product: R	emoval of	heels from corrosive trailer prior to	
Physical State:	⊠ Liquid ∐ Solid	Sludge	Powder Combination			
Color: Varies	Od	or: <u>Mild</u>				
Specific Gravity (wa	ater=1): <u>.9-1.3</u>	Density: lbs/gal				
Does this material c	ontain any total pheno	lic compounds? 🔲 Yes	⊠ No			
Does this material c	ontain any para substit	tuted phenolic compoun	de? 🗌 Yes 🛛 🖾	No		
Layers:	Single-phase	Multi-phase				
Container Type: Container Size:	<b>☑ D</b> rum <u>55 gal</u>	Tote [	Truck		Other (explain)	
Frequency:	Weekly	⊠ Monthly □	Quarterly	×	Yearly	
The state of the s	Produt					
Proper U.S. DOT Si	• •	Corrosive Liquids, N				
Class: B	UN/NA:	UN1760	FG: PG I	<u> </u>	RQ: 100	

Flash Point	pH	N/A	N/A	Solids
>140	>12.5			0-2%
Oll&Grease	TOC	Zinc	Copper	Nickel
<u>NA</u> mg/l	NAmg/l	NAmg/I	NAmg/1	NAmg/l

#### SECTION 4: Physical and Chemical Data

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The material / product consists of the following materials	Ranges are acceptable	gr %
Sodium Hydoxide	15-50	%
Hydrogen Peroxide	30-80	%
Water	60-80	%

#### SECTION 5: Safety Related Data

If the handling of this material / product requires the use of special protective equipment, please explain.

Chemical Suit. Rubber Gloves, Rubber Boots, Safety Goggles, Face Shield, Hard Hat

#### SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any):

Metals, Oxidizing Agents

#### SECTION 8: Material Producer's Certification

	The information contained herein is based on $\boxtimes$ generator knowledge and/or $\square$ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials
	tested are representative of all materials described by this document.
	Authorized Signature: Date: 4-13-09
	Authorized Signature:
	Printed Name/Title: Julio Cuellar/Cleaning Facility Mgr.
	Printed Name/Title: WIND COUNTY FACTION / CIEDINING FACTION / CIED
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	CES USE ONLY (DO NOT WRITE IN THIS SPACE)

CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Technical Manager Solution	
Date: 4-14-09 Approved Rejected	
Approval Number:	



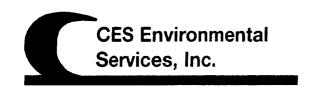
#### PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1.	Base Pricing (including freight):
	\$180 / DM
2.	Contamination Limits (maximum limit before surcharges apply);
3.	Surcharge Pricing:
-	
4.	Special Testing Requirements:
	Standard sulfidic caustic evaluations for use in the NaSH Production Process: Run full titration, density, percent solids and
ļ	percent oil via centrifugation, and perform sample acid reaction to ensure normal reaction. Check to ensure oil does not appear post reaction. Check odor, color, and appearance to ensure they are normal. If anything seems abnormal, contact
	management immediately.
	0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	Complete inbound load report if: either solids or oil exceed 1%, strangements are made for with customer service regarding customer surcharges. If any of these conditions exist, contact customer service immediately.
_ '	
5.	Treatment and Handling Protocol:
	Feedstock for NaSH into RV2/RV1. Process through reactor vessel for the recovery of sulfur compounds in the production of NaSH
	Wastewater may either go to System 1 or other wastewater treatment options
ì	
6.	Treated Wastewater Discharge Subcategory:
	Subcategory A Subcategory B Subcategory C



#### PROCESS FACILITY INFORMATION (CES USE ONLY!!)

7.	Tests for Product Recovered/Recycled (if applicable):
8.	Management for Product Recovered/Recycled (if applicable):



## Waste Pre-Acceptance/Approval Letter

Date 5/26/2009

Dear Nancy Girten

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3341

Expiration Date 5/27/2011

Generator: Paramount Petroleum Corporation - Long Beach

**Address:** 2400 E Artesia Blvd

Long Beach, CA 90805

Waste Information

Name of Waste: Spent Sulfidic Caustic

TCEQ Waste Code #: Product

**Container Type:** 

**Detailed Description of Process Generating Waste:** 

removal of sulfide compounds from scrubber

Color: varies Odor: rotten eggs pH: >12.5

**Physical State:** 

**Incompatibilities:** strong acids

Safety Related Data/Special Handling:

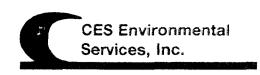
caustic PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.





4904 Griggs Road, Phone: (713) 676-1 TCEQ Industrial S U.S. EPA ID No: T	Houston, TX 770 460 Fax olid Waste Permit	21 x: (713) 676-1676 :No: 30948	2420 S. Gulfv Phone: (713)	vay Drive. 676-1460	Al Services – Port Arthur Facility , Port Arthur, TX 77641 Fax: (713) 676-1676 000079307 ISWR No: 88585
SECTION 1: Mate	rial Producer Info	ormation			
Company:		oleum Corporation - Long	Beach		
Address:	2400 E Artesia				
City, State, Zip:	Long Beach, CA	A 90805			
Contact:	Nancy Girten		Title:	Environ	imental Engineer
Phone No:	562-748-4698		Fax No:	562-529	9-8061
24/hr Phone:	562-984-6486				
U.S. EPA I.D. No:	CAL000313345				
State I.D.			SIC Code:	2911	
SECTION 2: Billin	g Information – 🏿	Same as Above			
Company:					
Address:					
City, State, Zip:					
Contact:		Title:			
Phone No:		Fax N	0:		
Name of Material / I Detailed Description Physical State:	Product: Spent Su	ating or Producing the N  Sludge  Filter Cake	Aaterial / Product: j		f sulfide compounds from scrubber
Color: <u>varies</u>		Odor:			
Specific Gravity (wa	ter=1): <u>1.03</u>	<b>Density:</b> <u>8.6-9.2</u> lbs.	/gal		
Does this material co	ntain any total ph	enolic compounds?	Yes 🛭 No		
Does this material co	ntain any para su	bstituted phenolic comp	ounds? 🗌 Yes 🛛 🗵	☑ No	
Layers:	⊠ Single-phase	e Multi-phas	se		
Container Type: Container Size:	Drum	☐ Tote	☐ Truck  5000 gal		Other (explain)
Frequency: Number of Units (cor	Weekly Meantainers): 2-3	Monthly Other:	Quarterly		Yearly
Proper U.S. DOT Shi	ipping Name:	Sodium Hydroxic	le Solution		
Class: 8	U <b>N</b> /	NA: UN1824	PG: II		RQ;

-Flash Point	pН	N/A	N/A	Solids
<140	<u>&gt;12.5</u>			<0.5%
Oil&Grease	TOC	Zinc	Copper	Nickel
sheenmg/I	NAmg/I	NAmg/l	NAmg/I	NAmg/l

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE  The material / product consists of the following materials	Concentration Ranges are acceptable	Units or %
Sodium Hydroxide	2-10	%
Water	98-90	%
Sulfides	<2	%

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. gloves, face shield, respirator,

#### **SECTION 6: Attached Supporting Documents**

List al	l documents.	notes, data.	and/or an	alysis attached	to this form as	part of the material	/ product	profile.
CASE WI	a accumination,	arocco, careen,	tarita, or terr	tery ord according	CO CILIO LOT III MO	part of the material	promue	Promise.

#### **SECTION 7: Incompatibilities**

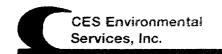
Please list all incompatibilities (if any):

Strong acids

#### **SECTION 8: Material Producer's Certification**

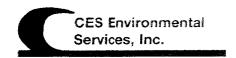
The information contained herein is based on \( \subseteq \text{generator knowledge and/or } \subseteq \text{analytical } \text{c}	data. I hereby certify that the above and
attached description is complete and accurate to the best of my knowledge and ability to	determine that no deliberate or willful
omissions of composition properties exist and that all known or suspected hazards have bee	en disclosed. I certify that the materials
tested are representative of all materials described by this document.	,
Authorized Signature: Mally Date	e: <u>5/20</u> /09

Printed Name/Title: Nancy Girten/Environmental Engineer	
Technical Manager: Reduce Manager:	
Date: 5-21-09 Approved Rejected	
Approval Number:	



### PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1.	Base Pricing (including freight):
	\$0.40 per gallon FOB Port Arthur
2.	Contamination Limits (maximum limit before surcharges apply):
	<0.5% solids. Minimum 2% NaOH concentration
3.	Surcharge Pricing:
	\$0.02 per % solids in excess of 0.5%
4.	Special Testing Requirements:
	Run through Standard Spent Caustic Sampling tests: pH, % NaOH by titration, metals, TOC, phenol
	Call matt loy if any questions.
	with which they at only of assistance.
Ĺ	
5.	Treatment and Handling Protocol:
ſ	Process to RV1
	Troccs to KV I
,	Tuesdad Westernator Dischause Cubestanaum
<b>6.</b>	Treated Wastewater Discharge Subcategory:
	☐ Subcategory A ☐ Subcategory B ☐ Subcategory C
	Subcategory A Subcategory D Subcategory C



#### PROCESS FACILITY INFORMATION (CES USE ONLY!!)

7.	lests for Product Recovered/Recovered (if applicable):
	See section 4
•	
8.	Management for Product Recovered/Recycled (if applicable);
8.	Management for Product Recovered/Recycled (if applicable); see section 5
8.	
8.	
8.	

4904 Griggs Road Houston TX 77021 Tel. (713) 676-1460 Fax. (713) 676-1460

## Waste Pre-Acceptance/Approval Letter

Date 5/26/2009

Dear **Nancy Girten** 

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # PA-3342

Expiration Date 5/27/2011

Generator: Paramount Petroleum Corporation

Address: 14700 Downey Ave

Paramount, CA 90723

Waste Information

Name of Waste: Spent Sulfidic Caustic

TCEQ Waste Code #: Product

Container Type:

**Detailed Description of Process Generating Waste:** 

removal of sulfide compounds from scrubber

Color: varies

**Physical State:** 

Incompatibilities: strong acids

Safety Related Data/Special Handling:

caustic PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

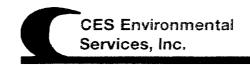
Odor: rotten eggs

pH: >12.5

Thank you,

Matt Bowman, President

CES Environmental Services, Inc.



As froduct

CES Environm 4904 Griggs Road, Phone: (713) 676-1 TCEQ Industrial S U.S. EPA ID No: T	Houston, TX 7702 1460 Fax Tolid Waste Permit	1 : (713) 676-1676 No: 30948	2420 S. Gulfv Phone: (713)	vay Drive. 676-1460	nl Services – Port Arthur Facil , Port Arthur, TX 77641 Fax: (713) 676-167 000079307 ISWR No: 88585
SECTION 1: Mate	erial Producer Info	rmation			
Company:		leum Corporation			
Address:	14700 Downey A				
City, State, Zip:	Paramount, CA	90723			
Contact:	Nancy Girten		Title:	Environ	ımental Engineer
Phone No:	562-748-4698		Fax No:	562-529	9-8061
24/hr Phone:	562-748-4711				
U.S. EPA I.D. No:	CAD008371098				
State I.D.			SIC Code:	2911	
SECTION 2: Billin Company: Address:	g Information – 🛚	Same as Above			
City, State, Zip:					
Contact:		Title:			
Phone No:		Fax N	No:		
Name of Material / l	Product: Spent Sul		Material / Product:		f sulfide compounds from scrubl
Color: varies		Odor:			
Specific Gravity (wa	ter=1): <u>1.03</u>	<b>Density:</b> <u>8.6-9.2</u> lbs	s/gal		
Does this material co	ontain any total pho	enolic compounds?	Yes 🛭 No		
Does this material co	ontain any para sub	stituted phenolic comp	ounds? 🗌 Yes 🏻 🗵	] No	
Layers:	Single-phase	☐ Multi-pha	se		
Container Type:	☐ Drum	☐ Tote			Other (explain)
Container Size:			5000 gal	_	•
Committee one.			South Gal		And appropriate for the second second
			₩)		
Frequency:	√ Weekly	Monthly	Quarterly		Yearly
Number of Units (cor	ntainers):	Other: ups	set conditions		
	į.	)			
		700 WUT	1 6 1		
Proper U.S. DOT Shi	ipping Name:	Sodium Hydroxi	de Solution		
Class: 8	UN/N	A: UN1824	PG: II		RQ:

Flash Point	pН	N/A	N/A	Solids
<140	<u>&gt;12.5</u>			<0.5%
Oil&Grease	TOC	Zine	Copper	Nickel
sheenmg/l	NAmg/I	NAmg/l	NAmg/1	<u>NA</u> mg/l

#### SECTION 4: Physical and Chemical Data

COMPONENTS TABLE  The material / product consists of the following materials	Concentration Ranges are acceptable	Units or %
Sodium Hydroxide	2-10	9/0
Water	98-90	%
Sulfides	<2	%

#### **SECTION 5: Safety Related Data**

If the handling of this material / product requires the use of special protective equipment, please explain. gloves, face shield, respirator,

#### **SECTION 6: Attached Supporting Documents**

List all documents, notes, data, and/or analysis attached to this form as part of the material / product profile.

#### **SECTION 7: Incompatibilities**

Please list all incompatibilities (if any):

Strong acids

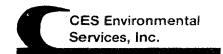
Authorized Signature:

#### **SECTION 8: Material Producer's Certification**

Printed Name/Title: Nancy Girten/Environmental Engineer

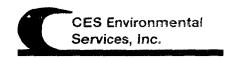
The information contained herein is based on  $\boxtimes$  generator knowledge and/or  $\boxtimes$  analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Technical Manager: Kerbhur Thy An	
Date: 5-21-09 Approved Rejected	
Approval Number:	



#### PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1	Base Pricing (including freight):
	\$0.40 per gallon FOB Port Arthur
2.	Contamination Limits (maximum limit before surcharges apply):
	<0.5% solids. Minimum 2% NaOH concentration
3.	Surcharge Pricing:
	\$0.02 per % solids in excess of 0.5%
4.	Special Testing Requirements:
	Run through Standard Spent Caustic Sampling tests: pH, % NaOH by titration, metals, TOC, phenol
	Call Matt Joy it any quest; as
5.	Treatment and Handling Protocol:
	Process to RV1
	;
ا آ.	Treated Wastewater Discharge Subcategory:
	Subcategory A Subcategory B Subcategory C



#### PROCESS FACILITY INFORMATION (CES USE ONLY!!)

See section 4	overed/Recycled (if	applicable).			
Management for Proc	uct Recovered/Recy	veled (if applicab	le);		
	uct Recovered/Recy	veled (if applicab	le);		
	uct Recovered/Recy	veled (if applicab	ie);		
Management for Procesee section 5	uct Recovered/Recy	veled (if applicab	le);		

Charge/P.O.:

281.471.6851 FAX:281.471.5821

#### **CERTIFICATE OF ANALYSIS! 62376.01**

1of 1

Customer: CES Env. Svcs.

Sample ID: Nephthenic Caustic 09-28-07 Environ ID: 62376.01

Project ID: Cityo LC Project Loc: LC, LA

Meirix: Waste Water

Sampled: 99-28-07 Received: 10-01-07

Type: Grab RECEIVED BASIS Reported: 10-05-07

	1.9	WŁ%	LAMIT	<u> </u>	METHOD			
		1 11 - 70		1.0.1	1 EPA 600.310.1	I OLC	10-03-07	107.65
	2.790	mg/l		0.05	EPA 600,625	LC	10-04-07	
	1.94	mg/l	-	0.01	SW846.8021B	DMB	10-02-07	16:52
	0.9	mg/f	5.00	0.2	SW846.8010B	JK		•
	0.5	mg/l	100	0.2	SW846.6010B	JK	10-03-07	13:20
<	0.2	mg/l	1.00	0.2	SW846.6010B	JK	10-03-07	13:20
<	0.2	mg/i	5.00	0.2	SW846.6010B	JK	10-03-07	13:20
<	0.2	mg/i	5.00	0.2	SW846.6010B	JK	10-03-07	19:20
<	0.2	mg/l	70.00	0.2	SW846.8010B	JK	10-03-07	13:20
<	0.2	mg/l	1.00	0.2	SW846.6010B	JK	10-03-07	13:20
<	0.2	mg/i	5.00	0.2	SW846.6010B	JK	10-03-07	13:20
<	0.2	mg/l	- :	0.2	SW846.6010B	JK	10-03-07	19:20
	0.018	mg/l	0.200	0.002	SW846.7470A	MIN	10-02-07	12:00
	***	0.9 0.5 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	0.9 mg/l 0.5 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l < 0.2 mg/l	0.9 mg/l 5.00 0.5 mg/l 100 < 0.2 mg/l 1.00 < 0.2 mg/l 5.00 < 0.2 mg/l 5.00 < 0.2 mg/l 70.00 < 0.2 mg/l 1.00 < 0.2 mg/l 1.00 < 0.2 mg/l	0.9 mg/l 5.00 0.2 0.5 mg/l 100 0.2 0.2 mg/l 1.00 0.2 0.2 mg/l 5.00 0.2 0.2 mg/l 5.00 0.2 0.2 mg/l 70.00 0.2 0.2 mg/l 1.00 0.2 0.2 mg/l 70.00 0.2 0.2 mg/l 5.00 0.2 0.2 mg/l 5.00 0.2 0.2 mg/l 0.2 0.2 mg/l 5.00 0.2 0.2 mg/l 5.00 0.2 0.2 mg/l 0.20 0.002	0.9 mg/l   5.00   0.2   SW846.60108	0.9	0.9 mg/l   5.00   0.2   SW846.8010B   JK   10-03-07

Callabia

REQ - Regulatory Litalt (Liear Should Conline Limits)

MQL - Method Quantitation Limit

PPM - Perts Per Million

mgit - PPM by Volume, mgitg - PPM by Weight

John Keller

John Keller, Ph.D Laboratory Director

## S.T.O.P.

**Sulfidic Treatment Operating Procedures** 

## S.T.O.P.

**Sulfidic Treatment Operating Procedures** 

## **INTRODUCTION**

The Sulfidic Treatment System is used primarily for receiving and treating streams with high sulfidic content. The process will involve oxidizing the sulfides and returning the stream to a treatable wastewater stream within the regulatory parameters established for CES Environmental Services Inc. Once the sulfides are successfully oxidized, the stream will be treated following the normal procedures used in the wastewater treatment plant. The operating procedures, safety systems, and the air quality controls are outlined in this manual.

### **OVERVIEW**

The following is a process overview of quantities of chemicals, and order and speed of treatment. The product will be treated using a batch method where a load is received, transferred into the treatment tank, treated, and finally, sent to the filter press to remove any solids. The following is an itemized sequence of events.

- Approximately 3,000 gal. of product is loaded into treatment tank.
- Inject 2,400 gal. Hydrogen Peroxide/water mix into batch @ 1 to 3 gpms. Hydrogen Peroxide and water will be mixed @ 800 Hydrogen Peroxide + 1,600 gal. of water.
- Once injection is complete, batch will continue to mix while samples are tested in the lab to ensure no residual Hydrogen Peroxide is present.
- Once test results are good, inject approximately 400 gals. of Sulfuric Acid @ ½ to 1 gpms.
- Test samples in lab to ensure that there are no Sulfides left in batch.
- Inject Ferric Chloride @ 4% or approximately 390 gal. 23 Golden
- Inject Lime to elevate ph to approx. 125. 9.5 10.6 Aller
- Add Polymer accordingly. 4,5 GARLENS
- Filter press entire batch using standard filter press procedures.
- The caustic scrubber tank will be tested periodically during the process. The caustic has reached full capacity when it reaches 15 30 % Sulfide content. Air samples will also be checked periodically to ensure no Sulfides are released to the main scrubber.

WHAT FRAC TANK#

\$500 SALL

143 - GALLAN

SID GCRUB - MASH 7700

28 /6 16%

## **INDEX**

1.	Safety Sys	stemsPage
	a)	H2S monitors
	b)	Air regulators, Pressure gauges, and Orifices
	c)	Breathing Air and 5 min. packs
	d)	Evacuation plans
	e)	Pressure relief valves
	f)	Emergency Generator and Exhaust fan
2.	Air Quali	ty ControlPage
	a)	Potassium Permangenate
	b)	Scrubber Solution
	c)	Caustic Scrub Tank
3.	Processin	g ProceduresPage
	a)	Product transfer from trailer to treatment tank
	p)	Hydrogen Peroxide transfer from holding tank to mixing total
	c)	Acid, Ferric Chloride, Caustic tank filling
	d)	Hydrogen Peroxide injection
	e)	Sulfuric Acid injection
	f)	Ferric Chloride injection
	g)	Lime injection
	h)	Polymer injection
	i)	Filter Pressing

### **Safety Systems**

#### **H2S** monitors

The unit has been equipped with an H2S monitoring system. The sensors are strategically located in and around the surrounding areas. The system has been calibrated and will be recalibrated annually or as the need arises. There are sensors located at eye level when entering the area, also located on the catwalks surrounding the tanks, and by the exhaust stack of the primary scrubber.

#### Air regulators, Pressure gauges, and Orifices

All pumps are equipped with air regulators that will deter excessive air supplied to the pumps. Orifices have also been installed so that the desired amount of injection is obtained. The air pressure and orifice sizes have been established through bench scale testing to ensure proper injection rates. Pressure gauges have been installed on the treatment tank and the caustic scrubber tank to allow the operator to monitor pressures while operating.

#### Breathing air and 5 min. packs

Breathing air will be positioned and available in critical areas such as the upper catwalk area, the lower operating area, and entrance to processing area. 5 min. packs will be located in 2 areas on the upper catwalk and 2 areas in the lower operating area.

#### **Evacuation plans**

In the event of an alarm, the operator is to immediately alert any personnel to evacuate the building. The operator must don either the 5 min. pack or supplied air and assess the situation. If feasible the operator should determine the cause of the alarm and correct. If correction is not possible, the operator should evacuate and contact emergency personnel.

#### Pressure relief valves

The treatment tank is equipped with a calibrated ½ lb. conservation bleeder vent. This vent releases if the tank builds more than ½ lb. of pressure or ½ lb. of vacuum. If released the vent is tied into the primary scrubber so that the tank can't be overcome by pressure or vacuum. The treatment tank is also equipped with a 2 lb. pop-off relief valve in the event that the conservation vent fails. The caustic scrubber is equipped with a relief vent calibrated @ 2.5 lbs.

#### Emergency generator and Exhaust fan

An emergency generator with an auto start is set up in the event of a power failure. If the power goes out, the generator automatically starts and supplies power to the unit. This back-up is designed to allow the operator to bring down the unit properly until main power is re-established. An exhaust fan is installed on the roof above the unit. The fan is controlled to automatically engage when the H2S monitors alarm, or the power fails, which the back-up generator will run.

## **Air Quality Control**

#### Potassium Permangenate

The carbon canister on the main scrubber is the final stage of the scrubber system. The carbon being used is impregnated with Potassium Permangenate which aides in the oxidation of sulfides.

#### **Scrubber Solutions**

The scrubber solutions consist of 2 treatment vats. The first vat consists of a caustic/bleach/water mixture to combat sulfide odors, and the second vat consists of a hydrocarbon encapsulator/deodorizer solution.

#### Caustic Scrub Tank

The vapors from the treatment tank will be pumped through diffusers located in the caustic scrub tank. This technique will enable the caustic in the scrub tank to absorb the sulfides released during treatment. The concentration will be monitored throughout the process. Max levels of absorption have been established, and once achieved the caustic will be changed out.

## **Processing Procedures**

#### <u>Transferring product from trailer to treatment tank</u>

- 1. Bring loaded trailer into unloading bay.
- 2. Check to ensure air monitors are on and working properly.
- 3. Check to ensure that the processing tank is sealed up, and all valves are closed.
- **4.** Hook up the vapor exchange line to the trailer and open the valve on the processing tank.
- 5. Open the fill valve located on top of the treatment tank.

- 6. Hook hose to trailer discharge fitting.
- 7. Open valves on trailer and open vent valve that is hooked up to the vapor exchange line.
- **8.** Open valve on discharge side of pump.
- **9.** Start pump and begin transferring product to the treatment tank.
- 10. When transfer is complete, hook air hose to crows-foot by valve on hose and blow line clean.
- 11. Close vapor exchange valve on trailer and pipe, and unhook.
- 12. Unhook trailer and put cap on hose.
- **13.** Close fill valve on top of treatment tank.
- **14.** Close vapor exchange valve on top of treatment tank.

#### Hydrogen Peroxide transfer from holding tank to mixing tote

- 1. Hydrogen Peroxide should be mixed @ 1 part Hydrogen Peroxide to 2 parts water.
- 2. Hydrogen Peroxide and water mixing will be regulated by flow meters to determine accurate mixture in tote.

#### Sulfuric Acid, Ferric Chloride, Caustic filling

- 1. 2" poly pumps are installed to fill tanks as needed. Each pump is outfitted with dedicated hoses, block valves, and check valves.
- 2. Pumps are located where forklifts are accessible to fill tanks as needed.

#### Hydrogen Peroxide injection

- 1. The Hydrogen Peroxide tote is equipped with a ½" diaphragm pump. It is also equipped with a flow meter and an air control valve. An Orifice plate has been installed to regulate the predetermined flow rate. The Orifice plate has been sized using 50 psi air consumption.
- 2. The Hydrogen Peroxide water mix will be injected between 1 and 3 gpms. The amount will start @ 1 gpm and ramp up to maximum allowable injection rate of 3 gpms. This process demands close monitoring so that the operator does not exceed the capacity of the vapor exchange pumps.
- 3. A typical 5,000 gal. load will take approx. 2,400 gal. of Hydrogen Peroxide mix.
- 4. When injecting spot checking the over flow line is important, as the product will foam if injected too fast.
- 5. The caustic scrubber should be checked periodically for sulfide content.
- 6. Air samples from the main scrubber should also be checked during this process.
- 7. Once complete allow mixer to run for 30 min. while continuously lab testing product for Hydrogen Peroxide contents. No Hydrogen Peroxide should be detected at this stage. If Hydrogen Peroxide is detected, allow product to continue mixing until no Hydrogen Peroxide is detected.

#### Sulfuric Acid injection

- 1. Once Hydrogen Peroxide parameters are satisfactory, close Hydrogen Peroxide valve on top of treatment tank and open Sulfuric Acid valve.
- 2. Begin injecting Sulfuric Acid by opening air control valve on Sulfuric Acid pump.
- 3. Pump is preset @ 50 psi with an Orifice plate of ½ gpm to 1 gpm.
- 4. Inject 400 gals. while monitoring pressures not to exceed ½ psi.
- 5. Once complete sample product to determine if any sulfides are present. If sulfides are present, consult with lab technician on injection rates.
- 6. Continue monitoring sulfide content in caustic scrubber during Sulfuric Acid injection.
- 7. Continue monitoring air samples in caustic scrubber during Sulfuric Acid injection.

#### Ferric Chloride injection

- 1. After lab test conclude that no sulfides are present in product, close Sulfuric Acid valve on top of tank and open Ferric Chloride valve.
- 2. Inject Ferric Chloride @ 5 gpms. to 4% or approx. 300 gals. Ensure pressure and temp. are within parameters.

#### Lime injection

- 1. Close Ferric Chloride valve on top of tank and open Lime injection valve.
- 2. Inject Lime until ph level reaches 10.5 on the ph monitoring system.

#### Polymer injection

- 1. Once ph levels 1.5 close Ferric Chloride valve and open Polymer valve on top of tank.
- 2. Inject Polymer as regulated per normal procedures in waste water treatment.

#### **Filter Pressing**

1. Once ph levels are satisfactory, begin pressing entire contents and return liquids to waste water treatment facility.



of

Joey Sutter

**December 18, 2008** 

Port Arthur Chemical and Environmental Services, LLC ("PACES") 2420 South Gulfway Port Arthur, TX 77640 713-676-1460

# Port Arthur Chemical and Environmental Services, Inc. LLC 2420 South Gulfway Port Arthur, TX 77640 713-676-1460

#### "PACES"

At Port Arthur (TX), PACES operates a chemical manufacturing facility which produces sodium hydrosulfide, Naphthenic Acid, and oils.

PACES uses sulfidic, phenolic, and Naphthenic Caustic as an effective substitute for commercial products and as feed to the chemical manufacturing process.

These materials, used as feeds, fall into a generic recycling exemption under RCRA 40 CFR 261.2(e)(1)(ii), since these materials are functioning as raw materials and therefore are outside of RCRA's jurisdiction, and thus are not wastes.

In as such, PACES is not a RCRA TSDF. It is a chemical manufacturing facility.

## **Incident Report**

of

**Joey Sutter** 

**December 18, 2008** 

Port Arthur Chemical and Environmental Services, LLC ("PACES") 2420 South Gulfway Port Arthur, TX 77640 713-676-1460

## Incident Report of Joey Sutter December 18, 2008

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# Joey Sutter Incident Report December 18, 2008

## Pre-Incident

Several days before December 17, 2008 Trailer 267 was loaded with oil from an emulsion breaking process at the PACES site 2420 South Gulfway, Port Arthur, TX.

On December 17, 2008, Brian Weathers sampled Trailer 267, removing a sample of the oil from inside the trailer (See Attachment 1).

### Incident

On December 18, 2008, at 2:00 p.m., Suzi Mock and Joey Sutter went to Trailer 267 to resample the oil in the trailer. Ms. Mock climbed to the top of Trailer 267 first. Mr. Sutter started up the ladder after and behind Ms. Mock. As Mr. Sutter reached the top of the latter he collapsed. Ms. Mock grabbed Mr. Sutter so he would not fall from the Trailer 267. Ms. Mock pulled Mr. Sutter to the top of the Trailer 267. Mr. Sutter and Ms. Mock did not open the dome lid nor did she or Mr. Sutter obtain a sample at this time. This was at 2:00 p.m., Thursday, December 18, 2008. According to Mr. Wood, Mr. Sutter collapsed on top of the dome lid before it was open. In addition, Mr. Wood did not suffer from hydrogen sulfide (H2S) exposure (See Attachment 13).

Ms. Mock called for help and at 2:10 p.m. (12/18/08) the Port Arthur Fire Department was notified (See Attachment 2). Within a few minutes of 2:00pm (12/18/08) Mr. Wood went to Ms. Mock to assist her with Mr. Sutter. Mr. Wood also assisted Ms. Mock to turn Mr. Sutter over, still on top of the Trailer 267.

At 2:20 p.m. (12/18/08) the Port Arthur Fire Department arrived and by 2:35 p.m., Mr. Sutter was removed from the top of the Trailer 267 by the Port Arthur Fire Department (See Attachment 2).

Ms. Mock did not experience any illness from any hydrogen sulfide release when she was with Mr. Sutter on top of the Trailer 267. Ms. Mock's personal hydrogen sulfide monitor did not trigger when she was on top of the Trailer 267. Ms. Mock's monitor was set to alarm at 10 ppm hydrogen sulfide. Mr. Wood did not experience any illness from hydrogen sulfide while assisting Mr. Sutter.

The Port Arthur Fire Department placed Mr. Sutter's clothes and the Port Arthur Fire Department hydrogen sulfide meter in a bag. The Port Arthur Fire Department measured a reading of -0- hydrogen sulfide. The Port Arthur Fire Department returned to the top of Trailer 267 two hours after Mr. Sutter was removed and measured only 1 ppm hydrogen sulfide (See Attachment 2).

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# Post Incident

OSHA tested Mr. Sutter's clothes for hydrogen sulfide and did not find any hydrogen sulfide (See Attachment 3). OSHA tested the head space over an oil sample from Trailer 267 and did not find any hydrogen sulfide (See Attachment 4).

Hydrogen sulfide technical information sources state that it takes 700 to 1000 ppm of hydrogen sulfide to knockdown an individual with hydrogen sulfide. In addition, when a group of people are together near a hydrogen sulfide release all persons suffer health problems (See Attachment 5).

OSHA measured organic sulfur compounds in the oil which exhibits a smell similar to hydrogen sulfide, but the organic sulfur compounds are liquid at ambient temperatures and not a toxic gas.

In addition, the oil in Trailer 267 was not heated prior to the December 18, 2008 incident, since no steam was available and the trailer had been loaded prior to December 17, 2008 without any modifications of the oil for two days (See Attachment 6).

In summary, pre-incident information and post incident information does not support the concept that hydrogen sulfide was released from a trailer during a short time of a few minutes at such level of 700 to 1000 ppm to cause one of two people side-by-side to collapse and die in minutes while the second person is holding on to the dying person without having her personal hydrogen sulfide alarm activate (See Attachment 7).

In addition, a third person climbed to the top of Trailer 267 to assist the two already on trailer without getting sick from hydrogen sulfide. Also, the Port Arthur Fire Department representative did not note any problems with anyone other than Mr. Sutter. Remember, Trailer 267 was sampled the day before with out any problems.

## Joey Sutter Autopsy Comments

The autopsy based its conclusions on a lab report from NMS Labs dated March 25, 2009. This NMS Labs Report based its conclusion on one test of one blood sample which was received on March 5, 2009 by NMS Labs, when the death occurred on December 18, 2008. This delay in testing appears to have violated acceptable protocols. NMS Labs states in their on-line test catalog information that the blood sample is only stable for one month. Lab Corp states in their thiosulfates in blood testing instructions that sample stability is for one month, if frozen and only 9 days refrigerated (See Attachment 8).

The NMS Labs Report did not state that Mr. Sutter died from hydrogen sulfide poisoning. The report stated that the measured value of thiosulfate in the blood sample was similar to values found in four other situations where people were believed to have died from hydrogen sulfide. However, the thiosulfate value of 43% of the cases were above 11 mcg/ml (value measured in Mr. Sutter's blood) and 43% were below the 11

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mcg/ml value. The NMS Labs Report did not speak to another NMS Labs analysis report on urine from Mr. Sutter received January 15, 2009 (See Attachment 8).

This report stated that thiosulfate in urine was normal. Technical information states that thiosulfate in urine is just as valid as thiosulfate in blood for measuring hydrogen sulfide exposure.

Both the NMS Labs Report of March 25, 2009 and the T. Brown Autopsy Report of April 17, 2009 omitted the sulfhemoglobin in blood data identified in the NMS Labs Report of January 20, 2009. Susan Jones at Southeast Texas Forensic Center (Jefferson County Morgue) stated that the sulfhemoglobin measured levels were below testing limits. As a biological marker the test data reflects no exposure to hydrogen sulfide.

Both the NMS Labs Report of March 25, 2009 and the Mr. Sutter Autopsy had many facts wrong. For example, both stated that the site operator (PACES) was boiling water in a closed dome tank (trailer) to drive off hydrogen sulfide. Remember, this material is oil in a tanker which is not heated, since no steam was available. Also, the thiosulfate analysis of the blood did not follow correct procedures, where the thiosulfate test in the urine did follow correct lab procedures.

The Sutter Autopsy Report did show that Mr. Sutter was over weight to the point of being obese and a smoker. Mr. Sutter's blood pressure values of August 2008 were 136/90 (See Attachment 11). These numbers reach the level of Stage 1 Hypertension. Technical data states that hypertension can result in hardening of the arteries, enlarged heart, and other health issues. The T. Brown Autopsy Report (04/17/09), states that Mr. Sutter had cardiomegaly (an enlarged heart), and hardening of the arteries. The risk and complications from an enlarged heart are heart failure, blood clots, cardiac arrest, and sudden death. Earlier on December 18, 2009, there had been discussions by Mr. Sutter with others that he was feeling ill.

## Summary

Hydrogen sulfide poisoning could have not been the mechanism that caused the death of Joey Sutter, since the exposure level (700 to 1000 ppm) required to knockdown and kill quickly would have affected companions, triggered alarms, showed up in clothes, and introduced odors over a wide area, since the odor threshold of hydrogen sulfide is 0.005 ppm. The autopsy conclusion is based on one lab result that uses one blood sample that is beyond sample stability limits. The other lab results that do not indicate hydrogen sulfide poisoning are ignored by the autopsy writer.

In addition, low levels of hydrogen sulfide over long periods of time would not have been a factor in the death since recent and past results show no adverse impacts from low levels of hydrogen sulfide. Most recent data shows that low levels of hydrogen sulfide lowers blood pressure (See Attachment 10).

However, Mr. Sutter had weight and blood pressure issues that were significant and indicators of personal health issues.

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# General Affidavit

STATE OF TEXAS
COUNTY OF Jefferson
BEFORE ME, the undersigned Notary, Tatricia Grace Kruge, on this  day of March, 2009, personally appeared Brian Weathers
known to me to be a credible person and of lawful age, who being by me duly
sworn, on his oath, deposes and says:
My name is Brian Weathers. I am over 21 years of age. I was the Supervisor on December 17, 2008 and on December 18, 2008 at the Port Arthur Chemical and Environmental Services, LLC ("PACES") plant site at the time Joey Sutter passed away. I have personal knowledge and experience with the PACES' personal H ₂ S Monitoring Equipment and Sampling of Trailers. During of December 17, 2008 my H ₂ S alarm at PACES did not sound an alarm warning when I obtained a sample from Trailer 267. H ₂ S Monitor was set at 10 ppm H ₂ S to alarm on December 17, 2008 when I sampled the Trailer 267.
Brian Weathers (Printed Name of Affiant)  7803 TWEEFTH FARWAY Acable TX 77346  (Address of Affiant, Line 1)
(Address of Affiant, Line 2)
STATE OF TEXAS  COUNTY OF DEFFENSE
Sworn to and subscribed before me on this 3 day of Mirch, 2008,
by
Posnicia Grace Krisgas (Notary Public Signature)  Netary Public State of Texas By Commission Erores May 29, 2010

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,	ARRIVAL required, unless canceled or did not arrive
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2 Automatic aid recv. Their FDID Their State	
3 Mutual aid given	CONTROLLED Optional, Except for wildland fires Special Studies  Local Option
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5 Other aid given Cheir Incident Number	LAST UNIT CLEARED, required except for wildland fires  Last Unit  Special Special
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EMS-6 H2 Detector	4 Kerosene: fuel burning equipment or portable storage 53 Enclosed mall
Wildland Fire-8	
X Apparatus-9  X Personnel-10  2 Detector did not al	Motor Oll: from engine or portable container 63 Military use
	65 Farm use
Arson-11 U Unknown	OOther: Special HarMat actions required or spill > 55gal., OOOther mixed use
J Property Use* Structures	341 Clinic, clinic type infirmary 539 Household goods, sales, repairs
	342 Doctor/dentist office 579 Motor vehicle/boat sales/repair
131 Church, place of worship	361 Prison or jail, not juvenile 571 Gas or service station
61   Restaurant or cafeteria	419 1-or 2-family dwelling 599 Business office
.62 Bar/Tavern or nightclub	429 Multi-family dwelling 615 Electric generating plant
13 Elementary school or kindergarten	439 Rooming/boarding house 629 Laboratory/science lab
15 High school or junior high	449 Commercial hotel or motel 700 Manufacturing plant
41 College, adult education	459 Residential, board and care 819 Livestock/poultry storage(barn)
11 $\square$ Care facility for the aged	464 Dormitory/barracks 882 Non-residential parking garage
31 Hospital	519 Food and beverage sales 891 🔣 Warehouse
Outside	936 Vacant lot 981 Construction site
24 Playground or park	938 Graded/care for plot of land 984 Industrial plant yard
55 Crops or orchard	946 Lake, river, stream
69 [Forest (timberland)	951 Railroad right of way  Lookup and enter a Property Use code only if you have NOT checked a Property Use box:
07 [Outdoor storage area	960 Other street Property Use  891
1 Dump or sanitary landfill	961 Highway/divided highway
3 Jopen land or field	962 Residential street/driveway Warehouse
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#### Narrative:

On 12/18/2008 at 14:10:33 dispatched To 2420 S Gulfway DR /PORT ARTHUR, TX 77640. The location is a Warehouse. The incident was determined to be a(n) EMS call, excluding vehicle accident with injury.

14:19:20 arrived on scene.

The following actions were performed on scene:

Extricate, disentangle

Provide advanced life support (ALS)

Units responding were:

U E2 responded.

Unit HR1 responded.

Unit SC63 responded.

16:45:03 all units back in service.

Dispatched to difficulty breathing. While enroute the call was upgraded to a full arrest. AOSTF patient on top of a tanker. Company emloyees had begun cpr. Fire engineer Barideaux and fire fighter Delacerda climbed on top of tanker and took over cpr. Captain Peake directed resources needed for the retrieval of patient from atop the tanker. Company employee made mention that the patient may have been exposed to toxic fumes. FD backboarded the patient and lowered the patient to the ground and onto waiting Stat Care ems stretcher. Fire fighter Thibedeaux rode with patient to SMH to assist ems.

HR1 went to SMH while E2 gathered patient info. E2 went to SMH and found hospital doing a hazmat wash on patient. E2 returned to scene to take drager readings from top of tanker.

Drager read 1 ppm of H2S. Obtained msds sheet on tanker contents. Msds showed chemical to be sulfurized isobutylene. Toxicological Data showed all areas to be: Practically non-toxic. E2 returned to SMH msds sheet for distribution to the hospital and JP. E2 returned to service.

### HR -1 Supplement:

HR-1 responded to assist. FF Thibodeaux rode in with EMS to St. Mary. Upon arrival the EMS st complained of a strong odor from the pt. and his clothing. Hospital staff removed eleming and placed into a biohazard bag. FD placed a meter in the bag. The meter detected 10 lel, no H2S, no CO, and indicated an O2 % of 20.9. The deceased was placed in a secure coom ouitside of the ER. FF Thibodeaux was provided with scrubs from the hospital and was

	MM DD YYYY		
NH7 15 TX State *	12 18 2008 Incident Date *	2 08-0012882 000 Station Incident Number * Exposure *	Complete Narrative

## Narrative:

able to remove her clothing and shower. Capt. Achord and FE Richard donned class B suits and airpacks and assisted in placing the deceased into two body bags for transfer to the morgue. Both the Class B suits and the pt.'s clothing went with the decedant to the morgue.

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Port Arthur Fire Department Haz-Mat Sampling Tanker Unit 267 (Close-up)

See Port Arthur Fire Department Incident Report # 08-0012882 Page 3 HR-1 Supplement
Indicating Draeger Read of 1 ppm of H2S (Incident Report Attached)

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Air Sampli	ng Repo	rt U.	S. Depart	ment of L	abor	Occu	pation	al Safet	y an	d Heal	th Ad	inini	strat	ion.				
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# Hydrogen Sulfide Poisoning: Clarification of Some Controversial Issues

Thomas H. Milby, MD, and Randall C. Baselt, PhD1

**Background** Hydrogen sulfide is a toxic gas about which much has been written. We discuss here several issues we believe would benefit from further clarification.

Conclusions We conclude that: 1) Certain neurotoxic effects of exposure are probably due to a direct toxic effect on the brain, while others are almost certainly a result of hypoxia secondary to H₂S-induced respiratory insufficiency; 2) pulmonary edema is a common consequence of poisoning and there is suggestive evidence of hyperactive airway responses in some individuals following brief H₂S-induced unconsciousness (knockdown); 3) criteria for acceptable community levels are very different than those governing occupational standards; 4) urinary thiosulfate determinations can be useful for monitoring occupational exposure; and 5) determination of sulfide ion concentrations in blood or major organs can be useful in corroborating a diagnosis of fatal H₂S toxicity, but there are many pit-falls in collecting, storing, and analyzing tissue and fluid samples. Am. J. Ind. Med. 35:192–195, 1999. © 1999 Wiley-Liss, Inc.

KEY WORDS: hydrogen sulfide; neurotoxic effects; pulmonary edema; urinary thiosulfate; blood sulfide.

#### INTRODUCTION

There have been several reviews of the toxicity of hydrogen sulfide to humans published in the last several decades [Milby, 1962; NRC, 1979; Beauchamp et al., 1984; Reiffenstein et al., 1992; EPA, 1993]. In the view of the authors, the majority of the data presented in these reviews continues to be valid, but some issues deserve further clarification. In this short communication, we consider the neurotoxic effects of acute exposure, effects on the lungs, community exposure issues, and diagnosis of poisoning utilizing urine, blood, and tissue analyses.

#### **NEUROTOXIC EFFECTS**

The above-cited reviews are generally consistent in the view that the most dramatic potential consequences of hydrogen sulfide exposure occur at high concentrations. At

750–1,000 ppm, inhalation of hydrogen sulfide causes abrupt physical collapse. If exposure is promptly terminated, many cases of collapse are followed by rapid and complete recovery. However, in some instances, presumably where exposure is more pronounced or prolonged, sudden collapse may give way to rapidly fatal respiratory paralysis [Milby, 1962; EPA, 1993; Guidotti, 1994].

Certain transitory neurotoxic effects associated with exposure to hydrogen sulfide such as dizziness, incoordination, and headache are probably due to the direct toxic effect of hydrogen sulfide on the brain: these effects appear far too quickly to be attributed to hypoxia. A phenomenon referred to as "knockdown" has been reported in oil field workers and others to describe sudden, brief loss of consciousness followed by immediate full recovery after short-lived exposure to very high concentrations of hydrogen sulfide (e.g., 750–1,000 ppm) [Guidotti, 1994; Aves, 1929; Smith and Gosselin, 1979]. Knockdown is likely a consequence of a direct toxic effect of hydrogen sulfide on the brain. This direct effect is believed to be due to the intracellular inhibition of cytochrome oxidase by sulfide ion, preventing utilization of oxygen [Nicholls, 1975].

Most victims of acute hydrogen sulfide poisoning who recover do so promptly and completely [Milby, 1962; NRC,

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### Case Report

# Two fatalities by hydrogen sulfide poisoning: Variation of pathological and toxicological findings

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Received 28 July 2007; received in revised form 26 November 2007; accepted 29 November 2007

Available online 8 February 2008

#### Abstract

We report the simultaneous deaths of two individuals by inhalation of hydrogen sulfide (H₂S), produced either by the putrefaction of a large quantity of sweet corn or by heavy oil that flowed out of the fuel tank of a large stranded cargo vessel. Ten workers went into a water ballast tank of the vessel to remove remaining heavy oil and suddenly felt unwell. Two of the ten workers (patient A, a male in his early thirties, and patient B, a male in his early sixties) died. Autopsies of the two patients revealed a partial green discoloration of the skin and pulmonary edema. Toxicological analysis revealed high levels of thiosulfate in the blood (0.089 mmol/L in patient A and 0.142 mmol/L in patient B). From these findings, we concluded that the cause of death in both patients was H₂S poisoning. In addition, the autopsy of patient A revealed petechiae of the palpebral conjunctiva and the mucous membrane of the mouth and erosion of the respiratory tract. The autopsy of patient B failed to reveal these observations. We presumed that patient B may have been exposed to higher H₂S levels, and that the circulation and respiration of patient B may have arrested faster than patient A. Thiosulfate levels in the blood may reflect the levels of H₂S exposure. This case suggests that the pathological and toxicological findings of H₂S poisoning vary from case to case.

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Keywords: Hydrogen sulfide poisoning; Thiosulfate; Pulmonary edema; Autopsy

#### 1. Introduction

Hydrogen sulfide (H₂S) is a colorless irritant gas that is inflammable and water-soluble. H₂S has a specific gravity of 1.19 (air = 1.00) and the characteristic odor of rotten eggs [1]. H₂S is poisonous, and accidents may occur on exposure to natural gas, volcanic gas, and industrial waste. Accidents have been reported in sewage disposal facilities [2-5] and chemical processing plants [6-8], and with the ingestion of sulfur products [9,10]. H₂S is also produced naturally by the putrefaction of organic compounds. The gas produced by this process is unstable and is rapidly metabolized as thiosulfate and sulfate by hepatic oxidation, therefore, quantifying the Original substances is difficult [11,12]. Fatalities by H₂S poisoning are encountered frequently in the forensic

practices. There is a large amount of sulfate in the blood and urine of healthy people, whereas the thiosulfate content is very low [11,13]. In addition, thiosulfate is a major metabolite of H₂S [11]. For these reasons, thiosulfate has been reported to be a useful indicator for H₂S exposure [2-4.11,14-17]. Here, we report a case of two patients who died almost simultaneously due to H₂S poisoning. In this case, the pathological and toxicological findings were different between the two patients. We compare the findings and discuss the variable biomechanisms of H₂S poisoning.

#### 2. Case report

A large-sized cargo vessel, approximately 36,000 tons, which was in transit with a large quantity of sweet corn, was destroyed by breaking in two due to stranding in a gulf under a heavy typhoon. The stranded cargo vessel was covered widely with a large amount of heavy oil that iss used from

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E-mail address: agomiho@m.kufm.koagoshima-u.ac.jp (M. Ago).

the fuel tank. Accordingly, an operation was performed to eliminate the heavy oil inside and around the cargo vessel. At approximately one month after the accident, ten workers, including our two patients entered a water ballast tank to recover the remaining heavy oil. At 11:15 a.m., all of the workers suddenly felt unwell. Eight workers escaped by themselves from the tank with clouded consciousness. At 11:58 a.m., rescue personnel equipped with gas masks found collapsed patient A (male in his early thirties) sitting on a sloped floor and leaning on a wall. At 11:59 a.m., they found collapsed patient B (male in his early sixties) lying prone on a sloped floor. His head was located on the upper side of the sloped floor. Although a small amount of black sludge had collected on the bottom of the sloped floor, the nose and mouth of both patients were not submerged in the sludge. Rescue personnel retrieved patient A from the tank at 0:04 p.m. and patient B at 0:16 p.m. The patients arrived at a hospital at 0:59 p.m. in a state of cardiopulmonary arrest. They were pronounced dead at 1:03 p.m. (patient A) and 1:04 p.m. (patient B), respectively. After using an electric fan to remove the harmful gas from the tank and about 4 h after the accident, the air concentration of H2S, oxygen (O2), and carbon monoxide (CO) at the scene were estimated to be 30 ppm, 20.8% and 355 ppm, respectively. Autopsies on patient A and B were performed at 20 and 24 h after death, respectively.

### 3. Autopsy findings

#### 3.1. Patient A

Patient A was a male in his early thirties. He was 169 cm in height and 68 kg in weight. A slight greenish discolor-

ation presented on his anterior cervical region and precordia. A few black subcutaneous bleedings were observed on regions of back and upper and lower limbs. The palpebral conjunctiva and the mucous membrane of the mouth revealed marked hyperemia and a few petechiae. The ocular conjunctiva revealed marked hyperemia, but was free of petechiae. The heart weighed 330 g, and a large amount of black dark-red fluid blood was retained in the heart. The left and right lungs weighed 830 and 925 g, respectively, with marked swelling and congestion. There was a little dark brown-red mucous fluid mixed with the micro foam in the trachea and bronchia. The mucous membrane of the glottis, trachea and bronchia revealed extensive erosion and submucosal hemorrhage (Fig. 1A). Extensive erosion and submucous hemorrhages were seen in the entire inner membrane of the esophagus. Erosion was found in the posterior wall of the fundus ventriculi and the cardia of the lesser curvature of the stomach. The lumen of the small intestine revealed congestion and localized erosion. The liver and the spleen weighed 1800 and 120 g, respectively, and both organs revealed no remarkable changes except for congestion. The brain weighed 1480 g, and slight cerebral edema was noted. There were no remarkable findings in other organs except for congestion.

Histological examination revealed marked congestion and edema in both lungs. Marked congestion, erosion and submucosal hemorrhage, as well as edema of the tunica propria and tela submucosa were observed in the epiglottis, glottis vocalis (Fig. 2A), trachea and bronchia. Similar findings were observed in the esophagus and stomach. Severe necroses were noted in the tracheal and bronchial glands. No remarkable changes, except for congestion, were found in other organs including the liver.

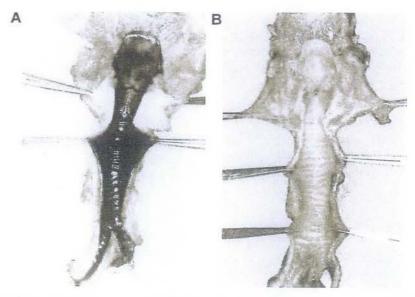


Fig. 1. The trachea of patient A (A) and B (B). The mucous of patient A reveals extensive erosion and the submucous bleeding, whereas the mucous of patient B reveals hyperemia, but is free of erosion.

# General Affidavit

STATE OF TEXAS	
COUNTY OF Harn'S	
BEFORE ME, the undersigned Notal	ry, Juanita Thomas, on this
22 day of May, 2	009, personally appeared <u>Matt Bowman</u>
known to me to be a credible persor	n and of lawful age, who being by me duly
sworn, on his oath, deposes and sa	<b>ys</b> :
on December 18, 2008, at the Port A LLC ("PACES") plant site at the time knowledge of the PACES operations	am over 21 years of age. I was the President rthur Chemical and Environmental Services, Joey Sutter passed away. I have personal During the morning and afternoon of not heated with steam or any other source of
(Signature of Affiant)	
Matt Bowman	
(Printed Name of Affiant)	
(Home Address)	
Housfon, Tx 77044 (City, State & Zip)	
STATE OF TEXAS	
COUNTY OF Harris	
Sworn to and subscribed before me	on this <u>22</u> day of <u>May</u> , 2009,
by MATT BOWNER	· · · · · · · · · · · · · · · · · · ·
JUANITA TROMAS  Notary Public, State of Texas  My Commission Expires  May 24, 2009	(Notary Public Signature)

# **General Affidavit**



### NMS Labs

3701 Weish Road, PO Box 433A, Willow Grove, PA 19090-0437 Phone: (215) 657-4900 Fax: (215) 657-2972 e-mail: nms@nmslabs.com

Robert A. Middleberg, PhD, DABFT, DABCC-TC, Laboratory Director

# Toxicology Report

Report Issued 01/20/2009 17:00

To:

10240

Southeast Texas Forensic Ctr.-Beaumont

Attn: Dr. Tommy Brown

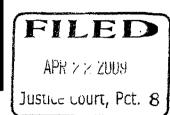
5030 Highway 69 South, Ste.700

Beaumont, TX 77705

Patient Name Patient ID Chain Age Gender Workorder

Page 1 of 2





Positive Findings:

Result	<u>Units</u>	Matrix Source
.1959	.mg/L	Urine
3.4	mcg/mL	Urine
1.7	mcg/g Creat	Urine
	.19 <b>5</b> 9 3.4	.1959 mg/L 3.4 mcg/mL

See Detailed Findings section for additional information

## Specimens Received:

ID	Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Miscellaneous Information
001	Gray Top Tube	10.75 mL	Not Given	Blood	
002	Red Top Tube	9.75 mL	Not Given	Urine	

All sample volumes/weights are approximations.

Specimens received on 01/15/2009.

### Testing Requested:

A nalysis Code	Description
<b>4235</b> B	Sulfhemoglobin, Blood
4472U	Thiosulfate, Urine



#### CONFIDENTIAL

Workorder Chain Patient ID 09009238 10973749 (b) (6)

Page 2 of 2

### Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Creatinine	1959	mg/L	5.0	002 - Urine	Colorimetry
Thiosulfate	3.4	mcg/mL	1.0	002 - Urine	IC
Thiosulfate (Creatinine corrected)	1.7	mcg/g Creat	0.51	002 - Urine	IC

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

## Reference Comments:

1. Creatinine - Urine:

ACGIH Normal range in adults: 300 - 3400 mg/L (mean: 1000 mg/L) [0.3 - 3.4 g/L] (mean: 1 g/L)] 1000 - 1600 mg/day (1.0 - 1.6 g/day).

Thiosulfate - Urine:

Thiosulfate is a byproduct of the metabolic degradation of cysteine and methionine. As a result, normal endogenous levels of thiosulfate can be found in urne. However, whether normal levels of thiosulfate can be found in serum, plasma or whole blood is debatable. Certain environmental exposures, dietary conditions and pathological states can give rise to increased urinary levels of thiosulfate as well as significant concentrations in serum, plasma and/or whole blood. Hydrogen sulfide exposure is a common source of increased urinary and serum levels of thiosulfate.

Reported endogenous thiosulfate levels in urine range from 1 - 5 mcg/mL.

Thiosulfate (Creatinine corrected) - Urine:

Normal: Up to 8 mcg/g Creatinine.

15 hours after a 60 minute exposure to air
concentrations of 60 micromoles/L Hydrogen Sulfide
resulted in urine concentrations up to 60 mcg/g
Creatinine.

This analysis was performed under chain of custody after receipt at NMS Labs. The chain of custody documentation is on file at NMS Labs.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded six (6) weeks from the date of this report, and generated data will be discarded five (5) years from the date of this report.

## Analysis Summary:

Acode 4235B - Sulfhemoglobin, Blood

- Analysis by Spectrophotometry (SP) for Sulfhemoglobin

Acode 4472U - Thiosulfate, Urine

- Analysis by Colorimetry (C) for Creatinine
- Analysis by Ion Chromatography (IC) for. Thiosulfate, Thiosulfate (Creatinine corrected)

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4/30/2009

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Test Updates

Analysis Code 42358

Test Name Sulfhemoglobin, Blood

Purpose Diagnostic Monitoring

Category Biological Marker (Exposure)

Special Handling Collect Blood during or at end of shift. Chilf and ship with

cold pack. DO NOT FREEZEI

Day(s) Test Set-up [SP] Tuesday Thursday 1 day



Sign me up for a-mail updates.

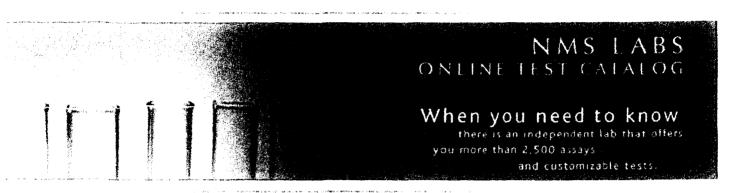
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#### CLIENT LOGIN

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**New Tests** 

Test Updates

Analysis Code 4472SP

Test Name Thiosulfate, Serum/Plasma

Test Includes Thiosulfate [IC]

Purpose Exposure Monitoring

Category Environmental/Occupation Toxin

Method(s) Ion Chromatography (IC)

Specimen Requirements 3 mt. Serum or Plasma

Transport Temperature Refrigerated

Specimen Container Lavender top tube (EDTA)

Special Handling Promptly centrifuge and separate Serum or

Plasma into a plastic screw capped vial

using approved guidelines.

Light Protection Not Required

Stability Room Temperature: 3 day(s) Refrigerated:

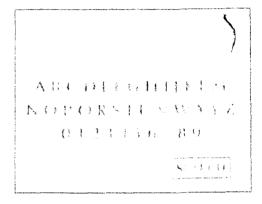
9 day(s) Frozen (-20 °C): 1 month(s)

Rejection Criteria Received Room Temperature. Polymer gel

separation tube (SST or PST).

Day(s) Test Set-up [IC] Monday-Sunday 7 days

Suggested CPT Code [IC] 82491







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#### Heart Conditions

High Blood Pressure (Hypertension)

Hypertension, the medical term for high blood pressure, is known as "the silent killer." At least 73 million Americans have high blood pressure, and as many as 20 million of them do not even know they have the condition. If left untreated, high blood pressure greatly increases your risk for heart attack and stroke.

Your heart pumps blood through a network of arteries, veins, and capillaries. The moving blood pushes against the arterial walls, and this force is measured as blood pressure.

High blood pressure results from the tightening of very small arteries called arterioles. Arterioles regulate the blood flow through your body. As these arterioles tighten (or constrict), your heart

inside the vessels grows.

High blood pressure can affect your health in four main ways:

- · Hardening of the arteries. Pressure inside your arteries can cause the muscles that line the walls of the arteries to thicken. Thickening causes the arteries to narrow. A heart attack or stroke can occur if a blood clot blocks blood flow to your heart or brain.
- Enlarged heart. High blood pressure increases the amount of work for your heart. Like any heavily exercised muscle in your body, your heart grows bigger. The bigger your heart is, the less able it is to maintain proper blood flow. As a result, you feel weak and tired and are not able to exercise or perform physical activities. Your heart has begun to fail. Without treatment, your heart failure will only get worse.
- Kidney damage. Prolonged high blood pressure can damage your kidneys if the arteries supplying your kidneys with blood are affected.
- Eye damage. If you have diabetes, high blood pressure can cause the tiny capillaries in the retina of your eye to bleed. This condition, called retinopathy, can lead to blindness.

What causes high blood pressure?

Be heart-smart about high blood pressure.



- How does high blood pressure affect health?
- What are the causes?
- How is it diagnosed?
- How high is high?
- How is it treated?

Your Guide to Lowering High Blood Pressure

has to work harder to pump blood through the smaller space, and the pressure

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About 90% to 95% of all high blood pressure cases are what is called primary, or essential hypertension. That means the real cause of the high blood pressure is not known, but a number of factors are associated with the condition. You are at an increased risk of high blood pressure if you

- Have a family history of high blood pressure.
- Are African American. African Americans develop high blood pressure more often than whites, and it tends to happen earlier in life and be more severe.
- Are male. Women are at an increased risk after age 55.
- Are older than 60. Blood vessels become more brittle with age and are not as flexible.
- Face high levels of stress. In some studies, stress, anger, hostility, and
  other personality traits have been shown to lead to high blood pressure,
  but the findings have not always been consistent. Emotional factors most
  likely add to the risk of high blood pressure for people who also have
  other risk factors.
- Are overweight or obese.
- Use tobacco products. Smoking damages your blood vessels.
- Use oral contraceptives. Women who smoke and use oral contraceptives greatly increase their risk.
- Eat a diet high in saturated fat.
- Eat a diet high in salt (sodium).
- Drink more than a moderate amount of alcohol. Experts say that moderate intake is an average of one to two drinks per day for men and one drink per day for women. One drink is defined as 1½ fluid ounces (floz) of 80-proof spirits (such as bourbon, Scotch, vodka, gin, etc.), 1 floz of 100-proof spirits, 4 floz of wine, or 12 floz of beer.
- Are physically inactive.
- Have diabetes.

Researchers have also found a gene that appears to be linked to high blood pressure. If you have the gene, it does not mean that you or your children will develop high blood pressure. But it does mean that you are more likely to develop high blood pressure, so your blood pressure should be closely watched.

The remaining patients with high blood pressure have what is called **secondary hypertension**. Secondary hypertension means that the high blood pressure is the result of another condition or illness. Many cases of secondary hypertension are caused by kidney disorders. Other conditions that can cause secondary hypertension are

- Problems with the parathyroid gland.
- Acromegaly, which is a condition where the pituitary gland makes too much growth hormone.
- Tumors in the adrenal or pituitary glands.
- Reactions to medicines for other medical problems.
- Pregnancy.

What are the symptoms of high blood pressure?

Most people who have high blood pressure usually do not have symptoms. In some cases, people with high blood pressure may have a pounding feeling in their head or chest, a feeling of lightheadedness or dizziness, or other signs. If

http://texasheart.org/HIC/Topics/Cond/hbp.cfm?&RenderForPrint=1

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there are no warning signs, people with high blood pressure may go years without knowing they have the condition.

How is high blood pressure diagnosed?

A visit to your doctor is the only way to find out if you have high blood pressure. You should have a general medical check-up that includes a review of your family's medical history. Your doctor will take several blood pressure readings using a device called a sphygmomanometer and run a few routine tests.

Your doctor may also use a device called an ophthalmoscope to look at the blood vessels in your eyes. Doctors can see if these vessels have thickened, narrowed, or burst, which may be a sign of high blood pressure. Your doctor will also use a stethoscope to listen to your heart and the sound of blood flowing through your arteries. In some cases, a chest x-ray and electrocardiogram may be needed.

Blood pressure readings

Blood pressure readings measure the two parts of blood pressure: systolic and diastolic pressures. Systolic pressure is the force of blood flow through an artery when the heart beats. Diastolic pressure is the force of blood flow within blood vessels when the heart rests between beats.

A blood pressure reading measures both the systolic and diastolic forces, with the systolic pressure listed first. The numbers show your pressure in units of millimeters of mercury (mm Hg)—how high the pressure inside your arteries would be able to raise a column of mercury. For example, a reading of 120/80 mm Hg means a systolic pressure of 120 mm Hg and diastolic pressure of 80 mm Hg.

Most doctors do not make a final diagnosis of high blood pressure until they measure your blood pressure several times (at least 2 blood pressure readings on 3 different days). Some doctors ask their patients to wear a portable machine that measures their blood pressure over the course of several days. This machine may help the doctor find out whether a patient has true high blood pressure or what is known as "white-coat hypertension." White-coat hypertension is a condition in which a patient's blood pressure rises during a visit to a doctor, but not at other times. Although doctors are not sure what causes white-coat hypertension, anxiety and stress probably play a role.

How often should blood pressure be checked?

Adults should have their blood pressure checked at least once a year. Many grocery or drug stores have blood pressure machines that you can use for free any time you visit the stores. Keep in mind, though, that these machines may not give you a correct reading.

Blood pressure monitors for use at home can be bought at drug stores, department stores, and other places. Again, these monitors may not always give you a correct reading. You should always compare your machine's reading

with a reading from your doctor's machine to make sure they are the same. Remember that any measurement above normal should prompt a visit to the doctor, who can then talk with you about the best course of action.

How high is high?

According to new guidelines released by the National Heart, Lung, and Blood Institute (NHLBI) in 2003, a reading below 120/80 mm Hg is now classified as normal blood pressure. Those with a blood pressure reading anywhere from 120/80 up to 139/89 (once thought to be normal) are now classified within a category called "prehypertension." The NHLBI says that about 45 million Americans fall within the prehypertension category, which puts them at twice the risk of developing high blood pressure later in life.

#### **Blood Pressure Classification Chart**

Category	Systolic (mm Hg)	Diastolic (mm Hg)
Normal	Lower than 120	Lower than 80
Prehypertension	120 - 139	80 - 89

#### Hypertension

Stage 1	140-159	90-99
Stage 2	160 or higher	100 or higher

Adapted from The Seventh Report on the joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7), NIH Publication No. 03-5233, May 2003

The classification chart is based on adults, aged 18 and older, who are not taking high blood pressure medicines and who are not acutely ill. If systolic and diastolic measurements fall into different categories, the higher category should be used to classify the person's blood pressure status.

How is high blood pressure treated?

The first course of action usually involves lifestyle changes, especially for people with prehypertension.

- Start eating a low-fat and low-salt diet.
- Lose weight, if you need to.
- Begin a regular exercise program.
- Learn to manage stress.
- If you smoke, quit.
- Drink alcohol in moderation, if at all. Remember that moderate intake is an average of one or two drinks per day for men and one drink per day for women.

Medicines are available if these changes do not help control your blood pressure within 3 to 6 months. Diuretics help rid your body of water and sodium. ACE inhibitors block the enzyme that raises your blood pressure. Other types of medicines— beta blockers, calcium channel blockers, and other vasodilators—work in different ways, but their overall effect is to help relax and widen your

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blood vessels and reduce the pressure inside the vessel.

See also on this site:

- Congestive Heart Failure
- Heart Attack Warning Signs
- Stroke
- "Recognizing Hypertension and its Symptoms in Children" (presentation available in the Project Heart subsite)



Does managing blood pressure have to be this hard?

#### See on other sites:

Visit the National Heart, Lung, and Blood Institute: Your Guide to Lowering High Blood Pressure.

Download an HBP Wallet Card.

Browse the NHLBI's Keep the Beat: Heart-Healthy Recipe Book.

MedlinePlus www.nlm.nih.gov/medlineplus/highbloodpressure.html High Blood Pressure

Updated Feburary 2009

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If you need information about keeping your heart healthy, e-mail the Heart Information Center or call 1-800-292-2221.

(Outside the U.S., call 1-832-355-6536.)

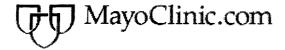
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# **Enlarged heart**

By Mayo Clinic staff

**Original Article:**http://www.mayoclinic.com/health/enlarged-heart/DS01129/DSECTION=causes

#### **Definition**

Enlarged heart (cardiomegaly) isn't a disease, but rather a symptom of another condition.

The term "cardiomegaly" most commonly refers to an enlarged heart seen on chest X-ray before other tests are performed to diagnose the specific condition causing your enlarged heart. You may develop an enlarged heart temporarily because of a stress on your body, such as pregnancy, or because of a medical condition, such as the weakening of the heart muscle, coronary artery disease, heart valve problems or abnormal heart rhythms.

While having an enlarged heart may not always be preventable, it's usually treatable. Treatment for enlarged heart is aimed at correcting the underlying cause. Treatment for an enlarged heart can include medications, medical procedures or surgery.

# **Symptoms**

In some people, an enlarged heart causes no signs or symptoms. Others may have these enlarged heart symptoms:

- Breathing difficulties
- Shortness of breath
- Dizziness
- Abnormal heart rhythm (arrhythmia)
- Swelling (edema)
- Cough

#### When to see a doctor

Enlarged heart is easier to treat when it's detected early, so talk to your doctor about any concerns you have about your heart health. If you don't have an enlarged heart, but are concerned about developing the condition, talk to your doctor about steps you can take to reduce your risk.

If you think you may have a problem with your heart based on new signs or symptoms you've been having, make an appointment to see your doctor.

Seek emergency medical care if you have any of these signs and symptoms, which may mean you're having a heart attack:

- Chest pain
- Shortness of breath
- Fainting

#### Causes

Sometimes, an enlarged heart develops for no apparent reason (idiopathic) but it can also be caused by a condition that can cause your heart to pump harder than usual. These conditions can include:

- High blood pressure. Having high blood pressure can make it so that your heart has to pump harder to deliver blood to the rest of your body, enlarging the muscle.
- Heart valve disease. Four valves within your heart keep blood flowing in the right direction. If the valves are damaged by such conditions as

rheumatic fever, a heart defect, infections (infectious endocarditis), connective tissue disorders, certain medications or radiation treatments for cancer, your heart may enlarge.

- Weakness of the heart muscle (cardiomyopathy). Cardiomyopathy is the thickening and stiffening of heart muscle. In early stages of cardiomyopathy, you may have no symptoms. As the condition worsens, your heart may enlarge to try to pump more blood to your body.
- A heart condition you're born with (congenital heart defect). Many types of congenital heart defects may lead to an enlarged heart, as defects can affect blood flow through the heart, forcing it to pump harder.
- Abnormal heartbeat (arrhythmia). If you have an arrhythmia, your heart may not pump blood as effectively as it would if your heart rhythm were normal. The extra work your heart has to do to pump blood to your body may cause it to enlarge.
- High blood pressure in the artery connecting your heart and lungs (pulmonary hypertension). If you have pulmonary hypertension, your heart may need to pump harder to move blood between your lungs and your heart. As a result, the right side of your heart may enlarge.
- Low red blood cell count (anemia). Anemia is a condition in which there aren't enough healthy red blood cells to carry adequate oxygen to your tissues. Left untreated, chronic anemia can lead to a rapid or irregular heartbeat. Your heart must pump more blood to make up for the lack of oxygen in the blood when you're anemic. Rarely, your heart can enlarge if you have anemia for a long time and you don't seek treatment.
- **Thyroid disorders.** Both an underactive thyroid gland (hypothyroidism) and an overactive thyroid gland (hyperthyroidism) can lead to heart problems, including an enlarged heart.
- Excessive iron in the body (hemochromatosis). Hemochromatosis is a disorder in which your body doesn't properly use iron, causing it to build up in various organs, including your heart muscle. This can cause an enlarged left ventricle due to weakening of the heart muscle.
- Protein buildup in your heart (amyloidosis). Amyloidosis is a condition in which abnormal proteins circulate in the blood and may be deposited in the heart, interfering with your heart's function. If amyloid builds up in your heart, it can cause it to enlarge.

#### Risk factors

You may have a greater risk of developing an enlarged heart if you have any of the following risk factors:

- **High blood pressure.** Having a blood pressure measurement higher than 140/90 millimeters of mercury puts you at an increased risk of developing an enlarged heart.
- A family history of enlarged heart or cardiomyopathy. If an immediate family member, such as a parent or sibling, has had an enlarged heart, you may be more susceptible to developing an enlarged heart.
- Blocked arteries in your heart (coronary artery disease). If you have coronary artery disease, fatty plaques in the arteries of your heart make it so blood can't easily flow through the vessels of your heart. Your heart has to pump harder to get an adequate amount of blood to the rest of your body, causing it to enlarge.
- Congenital heart disease. If you're born with a condition that affects the structure of your heart, you may be at risk for developing an enlarged heart, especially if your condition isn't treated.
- Valvular heart disease. The heart has four valves the aortic, mitral, pulmonary and tricuspid valves that open and close to direct blood flow through your heart. Valves may be damaged by a variety of conditions leading to narrowing (stenosis), leaking (regurgitation or insufficiency) or improper closing (prolapse). Any of these conditions may cause the heart to enlarge.

# **Complications**

The risk of complications from an enlarged heart depends on the part of the heart that is enlarged and the underlying cause. One of most serious types of enlarged heart is an enlarged left ventricle leading to the possibility of heart failure.

■ Heart failure. Heart failure occurs when your heart can't pump enough blood to meet your body's needs. Over time, the heart can no longer keep up with the normal demands placed on it. The heart muscle will weaken, and the ventricles stretch (dilate) to the point that the heart can't pump blood efficiently throughout your body.

Other complications of enlarged heart can include:

- Blood clots. Having an enlarged heart may make you more susceptible to forming small blood clots in the lining of your heart. If clots are pumped out of the heart and enter your circulatory system, they can block the blood flow to vital organs, including your heart and brain causing a heart attack or stroke. If clots develop on the right side of your heart, they may travel to your lungs, a dangerous condition called pulmonary embolism.
- Heart murmur. For people who have an enlarged heart, two of the heart's four valves the mitral and tricuspid valves may not close properly because they become dilated, leading to a backflow of blood. This flow creates sounds called heart murmurs. Heart murmurs are not necessarily harmful, but they should be monitored by your doctor.
- Cardiac arrest and sudden death. Some forms of enlarged heart can lead to disruptions in your heart's beating rhythm. Some of these heart rhythms are too slow to move your blood, and some are too fast to allow the heart to beat properly. In either case, these abnormal heart rhythms can result in fainting or, in some cases, cardiac arrest or sudden death.

## Preparing for your appointment

If you think you may have an enlarged heart, or are worried about your heart disease risk because of a strong family history, make an appointment with your family doctor. If heart disease is found early, your treatment may be easier and more effective. Eventually, however, you may be referred to a heart specialist (cardiologist).

Because appointments can be brief, and because there's often a lot of ground to cover, it's a good idea to be prepared for your appointment. Here's some information to help you get ready for your appointment, and what to expect from your doctor.

## What you can do

- Be aware of any pre-appointment restrictions. At the time you make the appointment, be sure to ask if there's anything you need to do in advance, such as restrict your diet. For a cholesterol test, for example, you may need to fast for a period of time beforehand.
- Write down any symptoms you're experiencing, including any that may seem unrelated to coronary artery disease.

- Write down key personal information, including a family history of heart disease, stroke, high blood pressure or diabetes, and any major stresses or recent life changes.
- Make a list of all medications, as well as any vitamins or supplements that you're taking.
- Take a family member or friend along, if possible. Sometimes it can be difficult to soak up all the information provided to you during an appointment. Someone who accompanies you may remember something that you missed or forgot.
- Be prepared to discuss your diet and exercise habits. If you don't already follow a diet or exercise routine, be ready to talk to your doctor about any challenges you might face in getting started.
- Write down questions to ask your doctor.

Your time with your doctor is limited, so preparing a list of questions will help you make the most of your time together. List your questions from most important to least important in case time runs out. For enlarged heart, some basic questions to ask your doctor include:

- What is likely causing my symptoms or condition?
- What are other possible causes for my symptoms or condition?
- What kinds of tests will I need?
- What is the best course of action?
- What foods should I eat or avoid?
- What's an appropriate level of physical activity?
- How often should I be screened for heart disease? For example, how often do I need a cholesterol test?
- What are the alternatives to the primary approach that you're suggesting?
- I have other health conditions. How can I best manage them together?
- Are there any restrictions that I need to follow?

- Should I see a specialist?
- Should my children be screened for this condition?
- Is there a generic alternative to the medicine you're prescribing me?
- Are there any brochures or other printed material that I can take home with me? What Web sites do you recommend visiting?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask questions during your appointment at any time that you don't understand something.

#### What to expect from your doctor

Your doctor is likely to ask you a number of questions. Being ready to answer them may reserve time to go over any points you want to spend more time on. Your doctor may ask:

- When did you first begin experiencing symptoms?
- Have your symptoms been continuous, or occasional?
- How severe are your symptoms?
- What, if anything, seems to improve your symptoms?
- What, if anything, appears to worsen your symptoms?

# Tests and diagnosis

If you have symptoms of a heart problem, your doctor will perform tests to determine if your heart is enlarged and to find out the underlying cause of your condition. In addition to a physical exam, these tests may include:

- Chest X-ray. X-ray images help your doctor see the condition of your lungs and heart. If your heart is enlarged it might first be detected by a chest X-ray, but other tests will usually be needed to find out the specific cause. Your doctor can also use an X-ray to diagnose conditions other than enlarged heart that may explain your signs and symptoms.
- Electrocardiogram. This test records the electrical activity of your heart through electrodes attached to your skin. Impulses are recorded as waves

and displayed on a monitor or printed on paper. This test helps your doctor diagnose heart rhythm problems and damage to your heart from a heart attack as well as give clues to other types of heart disease.

- Echocardiogram. An important test for diagnosing and monitoring an enlarged heart is the echocardiogram. An echocardiogram uses sound waves to produce a video image of your heart. In this test all of the chambers of the heart can be evaluated to determine if you do have an enlarged heart and to try and determine the cause. This test determines how efficiently your heart is pumping, assesses your heart valves, can look for evidence of previous heart attacks and can determine if you have congenital heart disease.
- Cardiac computerized tomography (CT) or magnetic resonance imaging (MRI). Although more commonly used to check for heart failure, more doctors are using these tests to diagnose heart problems. In a cardiac CT scan, you lie on a table inside a doughnut-shaped machine called a gantry. An X-ray tube inside the machine rotates around your body and collects images of your heart and chest.

In a cardiac MRI, you lie on a table inside a long tube-like machine that produces a magnetic field. The magnetic field aligns atomic particles in some of your cells. When radio waves are broadcast toward these aligned particles, they produce signals that vary according to the type of tissue they are. Images of your heart are created from these signals, which your doctor will look at to determine the cause of your enlarged heart.

- Blood tests. Your doctor may order blood tests to check the levels of certain substances in your blood that may signal that you have an enlarged heart. Blood tests can also help your doctor rule out other conditions that may cause your symptoms.
- Cardiac catheterization and biopsy. In this procedure, a thin tube (catheter) is inserted in your groin and threaded through your blood vessels to your heart, where a small sample (biopsy) of your heart can be extracted for analysis in the laboratory. Pressure within the chambers of your heart can be measured to see how forcefully blood pumps through your heart. Pictures of the arteries of the heart can be taken during the procedure (coronary angiogram) to ensure that you do not have any blockage.

# Treatments and drugs

Enlarged heart treatment focuses on correcting the underlying condition.

#### **Medications**

If cardiomyopathy or another cause of a weak heart muscle is to blame for your enlarged heart, your doctor may recommend medications to treat heart failure symptoms. These include:

- **Diuretics** to lower the amount of sodium and water in your body, which can help lower the pressure in your arteries and heart, such as furosemide (Lasix), or other diuretics, such as spironolactone (Aldactone), which can help prevent further scarring of your heart tissue
- Angiotensin-converting enzyme (ACE) inhibitors to lower your blood pressure and improve your heart's pumping capability, such as enalapril (Vasotec), lisinopril (Zestril, Prinivil), ramipril (Altace) or captopril (Capoten)
- Angiotensin receptor blockers (ARBs), such as losartan (Cozaar) and valsartan (Diovan), for those who can't take ACE inhibitors
- Beta blockers to lower blood pressure and improve heart function, such as carvedilol (Coreg) and metoprolol (Lopressor, Toprol-XL)
- **Digoxin**, which can help improve the pumping function of your heart and lessen the need for hospitalization for heart failure

#### Medical procedures and surgeries

If medications aren't enough to treat your enlarged heart, medical procedures or surgery may be necessary.

Medical devices to regulate your heartbeat. For people who have a certain type of enlarged heart (dilated cardiomyopathy), a special pacemaker that coordinates the contractions between the left and right ventricle (biventricular pacing) may be necessary. In people who may be at risk of serious arrhythmias, drug therapy or an implantable cardioverter-defibrillator (ICD) may be options. ICDs are small devices — about the size of a box of matches — implanted in your chest to continuously monitor your heart rhythm and deliver electrical shocks when needed to control abnormal, rapid heartbeats. The devices can also work as pacemakers. If the main cause of your enlarged heart is due to atrial fibrillation, then you may need procedures to return your heart to regular rhythm or to keep your heart from beating too quickly.

- Heart valve surgery. If your enlarged heart is caused by a problem with one of your heart valves, you may have surgery to remove the narrow valve and replace it with either an artificial valve or a tissue valve from a pig, cow or human-cadaver donor. If you have valve regurgitation, in which blood leaks backward through your valve, the leaky valve may be surgically repaired or replaced.
- Heart transplant. If medications can't control your symptoms, a heart transplant may be a final option. Because of the shortage of donor hearts, even people who are critically ill may have a long wait before having a heart transplant.

# Lifestyle and home remedies

While you can't cure your enlarged heart with home remedies, there are some things you can do to improve your condition. Your doctor may recommend adopting the following lifestyle changes:

- Quit smoking.
- Lose excess weight.
- Eat a low-salt diet.
- Control diabetes.
- Monitor your own blood pressure.
- Get modest exercise, after discussing with your doctor the most appropriate program of physical activity.
- Eliminate or minimize the amount of alcohol you drink.
- Try to sleep eight hours each night.

#### Prevention

In most cases you can't prevent your heart from enlarging. Let your doctor know if you have a family history of conditions that can cause an enlarged heart, such as cardiomyopathy. If cardiomyopathy or other heart conditions are diagnosed early, treatments may prevent the disease from worsening.

You can help reduce your chance of developing heart failure by avoiding some of

the conditions that can contribute to a weak heart, including the abuse of alcohol or cocaine, or not getting enough vitamins and minerals. Controlling high blood pressure with diet, exercise, and possibly medications also prevents many people who have an enlarged heart from developing heart failure later in life. Controlling risk factors for coronary artery disease — tobacco use, high blood pressure, high cholesterol and diabetes — helps to reduce your risk of an enlarged heart and heart failure by reducing your risk of heart attack.

#### References

DS01129 May 6, 2009

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# Attachment

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Hydrogen Sulfide Gas Shows Promise for Treating Heart Failure

November 11, 2008

At low concentrations, the toxic gas hydrogen sulfide protects the hearts of mice from heart failure, scientists at Emory University School of Medicine have found.

Their findings, presented Nov. 11 at the American Heart Association (AHA) Scientific Sessions conference in New Orleans, suggest that doctors could use hydrogen sulfide to treat humans with heart failure.



Best known for its rotten-egg smell, hydrogen sulfide can pose a deadly threat to miners or sewer workers. However, scientists have recently found that enzymes within the body produce the gas in small, physiological amounts, with multiple beneficial effects such as regulating blood pressure and attenuating inflammation.

David Lefer, PhD, professor of surgery at Emory University School of Medicine, and his team created a model of heart failure in mice by blocking their left coronary arteries either temporarily for an hour or permanently, causing part of their heart muscles to die. Hydrogen sulfide was administered intravenously once a day for a week.

John Calvert, PhD, assistant professor of surgery working with Lefer, will present the findings at the AHA Meeting. "Our results show that hydrogen sulfide can blunt the impact of heart failure on heart function and mortality in a mouse model of heart failure," Calvert says.

Four weeks after artery blockage, mice treated with hydrogen sulfide had an ejection fraction, a measure of heart function, about a third larger than controls (36 compared to 27 percent). He and his colleagues also found similar effects in mice engineered to make more of an enzyme that generates hydrogen sulfide.

Heart failure, a leading cause of hospitalization for the elderly, describes a situation when the heart muscle cannot pump enough blood to meet the body's needs. Previous injury to the heart muscle from a heart attack, obesity, diabetes or high blood pressure all are contributing factors.

In a separate presentation, Calvert presented experimental data on how hydrogen sulfide works in the heart. The gas appears to stimulate heart muscle cells to produce their own antioxidants and molecules that stave off programmed cell death, a response to the loss of blood flow.

Both Calvert and Lefer are based at Carlyle Fraser Heart Center at Emory Crawford Long Hospital in Atlanta. Some of the research was performed at Albert Einstein College of Medicine in New York, with Susheel Gundewar, Saurabh Jha and John Elrod.

The research was funded by the National Institutes of Health, the American Diabetes Association and by a research grant from the biotechnology firm Ikaria Holdings. Lefer is a paid consultant for Ikaria, which is developing technology for hydrogen sulfide delivery.

About émory Heart & vascular Center

Emory Heart & Vascular Center doctors are committed to providing clinically excellent cardiovascular patient care, pioneering innovative clinical research and training the best heart specialists in the world. A component of Emory Healthcare, the Center is consistently recognized by U.S. News & World Report as one of the top heart centers in the country. Emory Healthcare is the clinical arm of Emory University's Woodruff Health Sciences Center and is the largest, most comprehensive health care system in Georgia.

http://www.emoryhealthcare.org/news_events/feature20081111b.html

5/7/2009

# **Attachment**

11

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10909 East Frwy Houston, TX 77029
Phone: (713) 973-7943 Fax: (713) 973-7947
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Page 3 of 4

Revision Date: 01/14/200



#### NMS Labs

3701 Weish Road, PO Box 433A, Willow Grove, PA 19090-0437 Phone: (215) 657-4900 Fax: (215) 657-2972 e-mail: nms@nmslabs.com

Robert A. Middleberg, PhD, DABFT, DABCC-TC, Laboratory Director

Toxicology Report

Report Issued 01/03/2009 11:00

To:

10240

Southeast Texas Forensic Ctr.-Beaumont

Attn: Dr. Tommy Brown

5030 Highway 69 South, Ste.700

Beaumont, TX 77705

Patient Name Patient ID Chain Age Gender Workorder

Page 1 of 4

APR 27 ZUU9
Sustice Court, Pct. 8

Positive Findings:

Compound	Result	<u>Units</u>	Matrix Source
Caffeine	Positive	meg/mL	Blood
Cotinine	Positive	ng/mL	Blood
Nicotine	Positive	ng/mL	Blood
Theobromine	Positive	mcg/mL	Blood
Acetaminophen	4.6	medmi	Blood

See Detailed Findings section for additional information

#### Specimens Received:

ID Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Miscellaneous Information
001 Gray Top Tube	10.75 mL	12/19/2008	Blood	

All sample volumes/weights are approximations.

Specimens received on 12/30/2008.

#### Testing Requested:

Analys is Code	Description
8052B	Postmortem Toxicology - Expanded, Blood

#### POSTMORTEM EXAMINATION ON THE BODY OF

# Joey Sutter 6259 Gulfway Drive Groves, Texas

HISTORY: This 36 year old Caucasian male was found dead at 3:00 p.m. on December 18, 2008, at Christus Hospital - St. Mary in Port Arthur, Texas.

AUTOPSY: The autopsy was performed by Dr. Tommy J. Brown at the request and upon the written authorization of The Honorable Tom Gillam, III, Justice of the Peace, Precinct 8, Jefferson County, Texas, beginning at 6:45 a.m. on December 19, 2008, in the Southeast Texas Forensic Center, Inc., DBA: Jefferson County Morgue.

CLOTHING: The decedent was nude. The body was enclosed within two body bags. A strong chemical odor exuded from the body through both sealed body bags. A third body bag accompanied the body and held two plastic bags that contained clothing that had been cut away from the decedent's body. It also had a strong chemical odor. One of the plastic bags contained a pair of blue undershorts, a pair of blue gym shorts, a green shirt with "CES Environmental Services" written on the left upper chest, a pair of blue denim trousers, a black weave belt and a pair of white socks. In the other red plastic bag was a red medical blanket. All the clothing had a strong chemical odor. All were placed in a biohazard bag and submitted to OSHA at their request for testing.

PERSONAL PROPERTY: Within the right front trousers pocket was a blue and silver colored pocket knife. Accompanying the body was a Samsung cell phone. There was no other personal property on or accompanying the body.

EVIDENCE OF MEDICAL INTERVENTION: An oral airway was present within the mouth. Adhesive defibrillator/ ECG/ pacing electrodes were present over the right upper and left lower lateral chest. ECG electrode discs were present on the lateral right and left shoulders.

08-1253 Joey Sutter

EXTERNAL APPEARANCE: The body was that of a white male that measured 74 inches in length, weighed 255 pounds and appeared the stated age of 36 years. There was full rigor mortis. The hair was brown mixed with some blonde streaks and measured 15/8 inches in length. There was congestion of the head and neck with distention of the neck veins. There was a purple coloration that extended from the top of the head to the nipple line across the chest. The eyes were closed; the conjunctivae were mildly congested; the corneae were clear; the irides were hazel to green. There were small areas of coalescent hemorrhage of the conjunctivae of the eyes. Several small petechiae were present over the forehead and upper face. There was a small amount of bloody like fluid that exuded from the nostrils along with foamy fluid. The nose and ears were otherwise unremarkable. Vomitus was present along the lower left side of the mouth and the lower left jaw area. The teeth were natural. There were no abrasions, contusions or lacerations of the inner mucosa of the lips. The neck was symmetrical and without scars or evidence of trauma. The chest was symmetrical and without scars or evidence of trauma. The abdomen was mildly protuberant and without palpable masses. There was a 11/4 inch abrasion to the left of the umbilicus. There were no identifiable scars of the abdomen. The pubic hair was small in quantity. The penis appeared circumcised. Both testicles were palpable within the scrotal sac. There were small scars of the knees and anterior lower legs. There was a tattoo of the name "Amber" and what looked like "Sam" on the proximal left lower leg. Other tattoos were present on the back of the left lower leg. There was a scabbed abrasion that measured ⁵/₈ of an inch on the proximal medial left lower leg. There was a tattoo of a head of a large cat on the lateral left upper arm and a tattoo that appeared to be a dragon. There was a tattoo of dice on the back of the left hand. Several transverse scars were present on the mid left forearm that extended down to on top of the lateral left wrist area. There were transverse scars on the anterior left wrist that appeared to be three in number. The lateral right shoulder had tattooed initials that were indiscernible. On the back of the right wrist was a tattoo of the name "Ashley". There was an orange-like coloration of the right hand. There was a tattoo of an indiscernible word in the web space of the right hand. The back had dependent posterior fixed lividity with blanching over the pressure areas. The back had a large tattoo on the left upper and mid back of various figures. There was a 23/4 by 11/4 inch scabbed abrasion on the back of the right forearm. The body had a strong chemical odor.

08-1253 Joey Sutter

INTERNAL EXAMINATION: The body was opened with a Y-shaped thoracoabdominal incision to reveal fat and red-brown muscles of the upper anterior thorax. The abdominal panniculus at the level of the umbilicus measured 2 inches. The organs were in their usual locations and had normal anatomic relationships to one another. There was no fluid within the peritoneal or the pleural cavities. A small amount of serous fluid was present in the pericardial sac. Mucus was present within the nostrils and the upper airway.

CARDIOVASCULAR SYSTEM: The heart weighed 470 grams. It had a smooth and glistening epicardial surface with a moderate amount of fat. The coronary arteries followed a normal distribution. There was concentric moderate atherosclerosis of the left anterior descending coronary artery. The right coronary artery and circumflex had mild to moderate atherosclerosis. On sectioning, the myocardium was red-brown. There was no fibrosis. The walls of the right and left ventricles were of normal thickness. The cardiac valves were of normal size and had thin pliable cusps. The aorta had mild proximal atherosclerosis that became mild to moderate in the more distal portion.

RESPIRATORY SYSTEM: The right lung weighed 820 grams and the left weighed 730 grams. The upper pleural surfaces were dark gray and became darker in the more dependent portions. On sectioning, hemorrhagic and foamy fluid exuded from the cut surfaces along with a variegated appearance. There was no tumor or pulmonary emboli.

HEPATOBILIARY SYSTEM: The liver weighed 2,500 grams. It had a dark brown external and cut surface. There was no tumor, infectious process or hemorrhage. The gallbladder contained less than 5 milliliters of a viscid green bile. There were no stones. The hepatobiliary ducts were patent.

SPLEEN: The spleen weighed 430 grams. It had a purple-gray intact capsule. On sectioning, the parenchyma was red-brown. The Malpighian corpuscles were prominent.

ADRENALS: Both adrenal glands were surrounded by a moderate amount of fat. On sectioning, the cortices were yellow and of normal thickness. The meduliae were gray-tan and unremarkable.

08-1253 Joey Sutter

# DEPARTMENT OF HEALTH AND HUMAN SERVICES TO THE

## Calculate Your Body Mass Index



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Menu Planner

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WeCan!

STANDARD

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METRIC

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(inches)

Body mass index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women.

- Enter your weight and height using Standard or Metric measures.
- Click on "Compute BMI" and your BMI will appear in the heart of the figure.

#### **BMI Categories:**

- Underweight = <18.5
- Normal weight = 18.5-24.9
- Overweight = 25-29.9
- Obesity = BMI of 30 or greater

The BMI Tables

Your BMI: 32.7

#### Aim for a Healthy Weight:

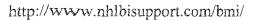
- Assessing Your Risk
- Limitations of the BMI
- Controlling Your Weight
- Recipes

Note: If this does not work with your browser or for a text alternative to this page, go to our CGI based BMI Calculator

Healthy Weight Home - Menu Planner - Portion Distortion - WeCant Protessional Education Materials - Patient and Public Education Materials

NHLBI Home - OEI Home - NHLBI Privacy Statement - Contact the NHLBI - Accessiolity





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# Attachment

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#### General Affidavit

STATE	of Z	Lew	Mex	الأرث
STATE COUNT	Y OF_	Ed	dex	

BEFORE ME, the undersigned Notary 2009, personally appeared William B. Wood known to me to be a credible person and of lawful age, who being by me duly sworn. on his oath, deposes and says:

"My name is William Brad Wood. I am over 21 years of age. I was an employee on December 18, 2908, at the Port Arthur Chemical and Environmental Services, LLC ("PACES") plant site at the time Joey Sutter passed away. I have personal knowledge of the PACES operations.

At approximately 14:00 hours. I climbed on top of Trailer 267, Suzi Mock had informed me that she and Joey Sutter were to take a sample of the product from Trailer 267. Joey was instructing Suzi on how to open the dome lid and retrieve a sample.

Joey had just began loosening one of the dome lid fasteners when he began bleeding from his nose and collapsed on top of the dome lid. Joey was face-down with his upper torso inside the crash box, face lying on the dome lid, and his legs dangling off the side of the trailer. Suzi Mock was with Joey Sutter. The dome lid was not opened.

I instructed Suzi that we needed to roll Joey over in order to begin reviving him. I was afraid Joey had suffered a heart attack and that emergency response craws would not get there in time to property help Joey and get him off the top of the trailer.

After Joey had been taken to the hospital emergency responders arrived back at PACES and were talking with Brian Weathers. Brian, after talking with emergency responders told me that the emergency response crew believed that Joey had suffered from a pulmonary embolism because Joey's chest was blue and this was classic sign of Pulmonary Embolism.

(Signature of Affiant)

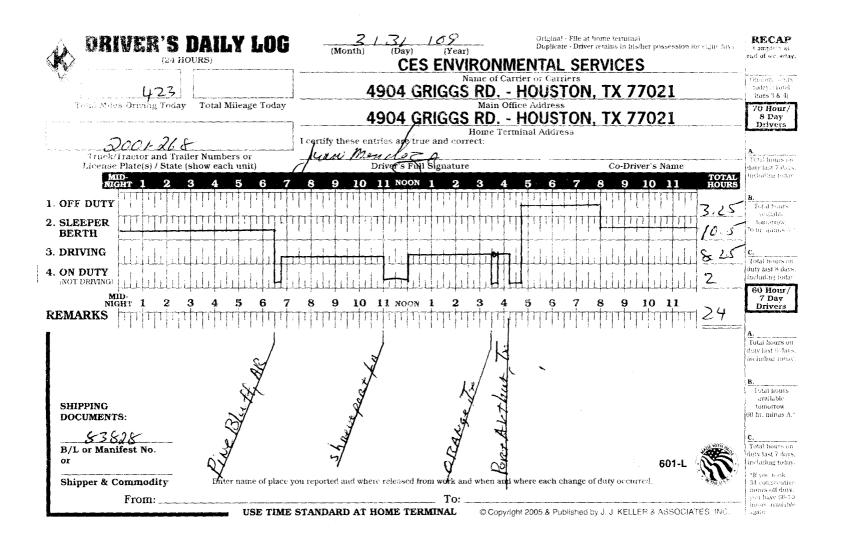
William B. Wood (Printed Name of Affiant)

Sworm to and subscribed before me on this

# **General Affidavit**

STATE OF TEXAS
COUNTY OF Jufferson
BEFORE ME, the undersigned Notary, Tatricia GRALE Kriger, on thi
day of June, 2009, personally appeared Suzi Mock
known to me to be a credible person and of lawful age, who being by me duly
sworn, on her oath, deposes and says:
My name is Suzi Mock. I am over 21 years of age. I was an employee on December 18, 2008 at the Port Arthur Chemical and Environmental Services, LLC ("PACES") plant site at the time Joey Sutter passed away. I have personal knowledge and experience with the situation during the incident involving Joey Sutter. During the morning and afternoon of December 18, 2008 my personal monitor for the hydrogen suffice did not sound an alarm warning. My personal hydrogen sulfide monitor alarm warning.
set at 10 ppm for hydrogen sulfide on December 18, 2008. I was with Joey Sutter when we were on top of Trailer 267. When Joey collapsed on top of the trailer, I held his body so he would not fall from the trailer. During the time I was on top of Trailer 267 with Joes I did not personally become ill from any hydrogen sulfide gas. Joey did not open the dome lid on top of Trailer 267. He started to untwist one of the many hold down clamps of the dome lid when he collapsed."
(Signature of Affiant)
Suzi Mock (Printed Name of Affiant)
(Street Address of Affiant, Line 1)
Port Arthur TX77640 (City, State, Zip of Affiant, Line 2)
STATE OF TEXAS
COUNTY OF
Sworn to and subscribed before me on this _// day of
SEAL  Propose Grand House  Neary Public  State of Take  By Commonton Bay  Nay 29, 2910  Nay 29, 2910

Feb 2009 1FTA 6065

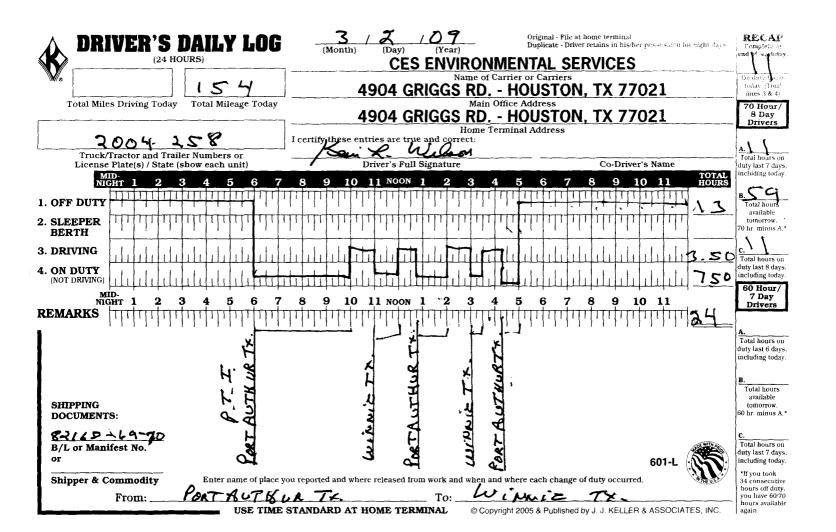


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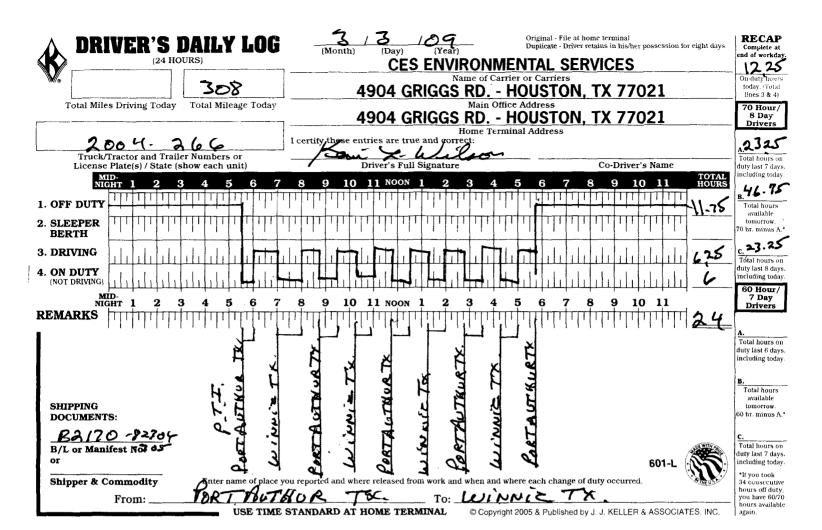
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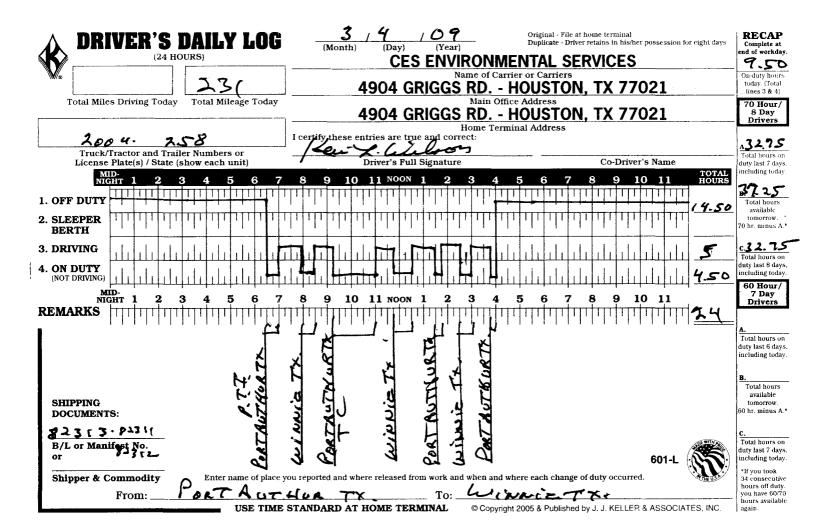
minus A 1. OFF DUTY 2. SLEEPER 3,5 70 hr. minas A. BERTH 8,5 3. DRIVING C. Total flours on duty last 8 days. including today 4. ON DUTY 5,5 (NOT DRIVING) 60 Hour/ MID-NIGHT 7 Day Drivers 7 6 8 10 2 3 5 6 8 9 10 24 REMARKS A. Total hours on dnty last 6 days. including today Total bours available tomortow. 60 hr. minus A * SHIPPING DOCUMENTS: 83828 C. Total hours on duty last 7 days, including today. B/L or Manifest No. or *If you took "If you took 34 consecutive hours off duty, you have 60/70 hours available again. Enter name of place you reported and where released from work and when and where each change of duty occurred Shipper & Commodity From: USE TIME STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES. INC



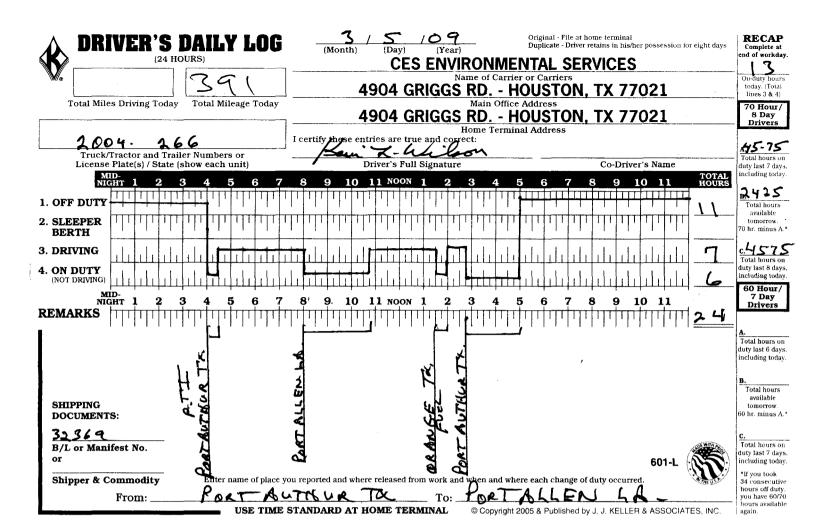
DATE: 3 2 0 4	TRACTOR/TRUCK NO.: $2004$ TRAILER(S) NO.(S): $258$	
OHECK OHECK	I detect the following defects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or result in mechanical breakdown.  I detect the following defects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation result in its mechanical breakdown.	
	ndicate whether defects are on TRACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.	
		_
	DRIVER'S SIGNATURE	
□ <b>A</b>	ove defects corrected    Above defects need not be corrected for safe operation of vehicle	
	MECHANIC'S SIGNATURE:	_
	DRIVER'S SIGNATURE:	



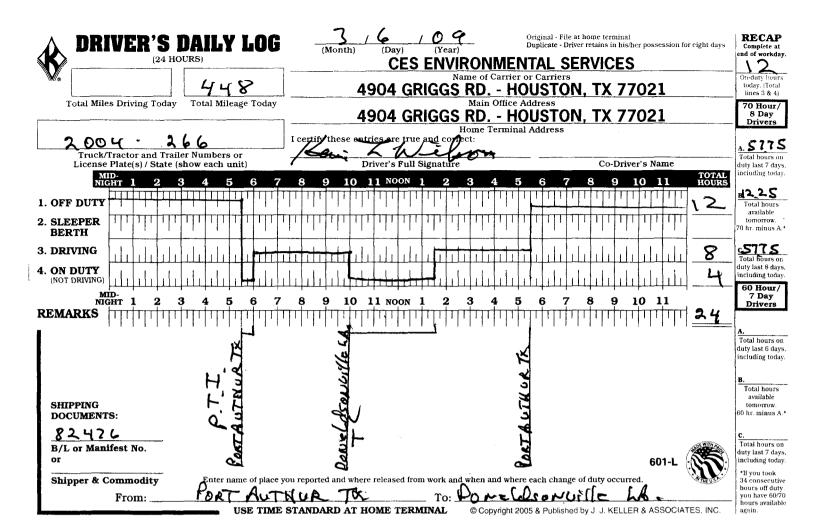
DATE: 3-3-09	TRACTOR/TRUCK NO.: 264 TRAILER(S) NO.(S): 266
от ш От ш	Light defect or deficiency in this motor vehicle as would be likely to affect the safety of its operation or result in its mechanical breakdown.
CRX KA T E	☐ I detect the following defects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or result in its mechanical breakdown.
Ind	icate whether defects are on TRACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
	grant and the grant of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the stat
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	DRIVER'S SIGNATURE:
☐ Abov	e defects corrected
	MECHANIC'S SIGNATURE:
	DRIVER'S SIGNATURE:



DATE: 3	409 TRACTOR/TRUCK	NO.: 2004	TRAILER(S) NO.(S): 2.5	7
. 12 [†]	detect no defect or HOB EPO CRX	deficiency in this motor vehicle as wn.	s would be likely to affect the safety	of its operation or result in its
		g defects or deficiencies in this mot cal breakdown.	tor vehicle as would be likely to affe	ct the safety of its operation or
	Indicate whether defects are	on TRACTOR/TRUCK or TRAILER	? - Use sufficient detail to locate for r	nechanic.
	<b>\$</b>	:		
	· ,			
	<u> </u>			
		·		
	- 1944	DRIVER'S SIGNATURE:		
	☐ Above defects corrected		need not be corrected for safe opera	ation of véhicle
	MEG	CHANIC'S SIGNATURE:		
		DRIVER'S SIGNATURE: © Copyright 2003 & Published by J. J. KELLER &	ASSOCIATES, INC.	



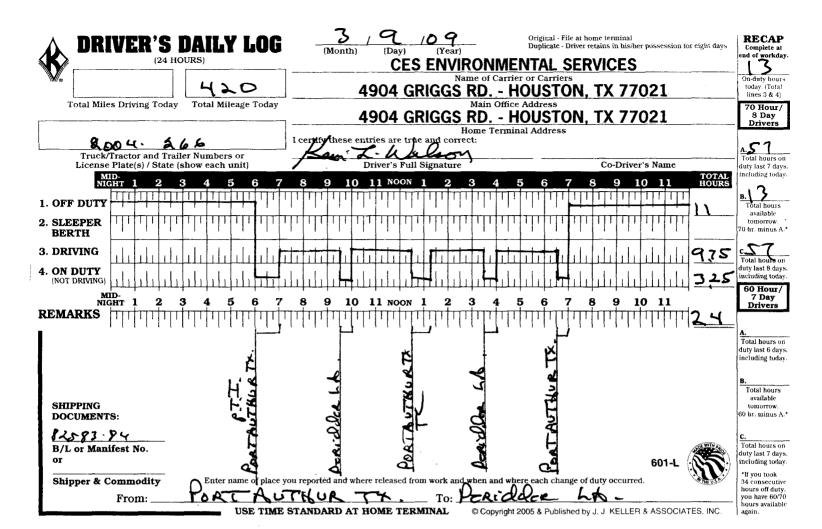
DATE: 3	TRACTOR/TRUCK	NO.: 2004	TRAILER(S) N	o.(s): <u>Z 6 6</u>	
• 14	EPO CRX	r deficiency in this motor vehic own. g defects or deficiencies in this cal breakdown.	****		
• Y >	•				
	indicate whether defects are	on TRACTOR/TRUCK or TRA	LER - Ose sufficient detail	to locate for mechanic.	
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					L-7111000-0-7-1111
		•			
		DRIVER'S SIGNATURE			
	☐ Above defects corrected	□ Above defe	ects need not be corrected	for safe operation of vehicle	
	ME	CHANIC'S SIGNATURE:		·	
		DRIVER'S SIGNATURE:	ER & ASSOCIATES INC	······································	



DATE: 3,	6.09	TRACTOR/TRUCK NO.: _	2004	(	TRAILER(S	) NO.(S): 166	
<del>.</del> .	APPROPR- CHEC:	Hetect no defect or defic mechanical breakdown.			. s		
	K Å T E	<ul> <li>I detect the following defe result in its mechanical bream</li> </ul>	cts or deficien eakdown.	ncies in this motor v	ehicle as would	d be likely to affect the	safety of its operation or
	Ind	icate whether defects are on <b>TF</b>	RACTOR/TRU	CK or TRAILER - U	lse sufficient de	tail to locate for mechai	nic.
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	<del>.</del>			ç	*		
		` .		11			
		DRIV	ER'S SIGNAT	URE:			
	☐ Abov	e defects corrected		Above defects nee	d not be correc	ted for safe operation of	vehicle
		MECHAN	IC'S SIGNATI	JRE:			
		DRIVE	ER'S SIGNATU	URE:	CIATES INC	· .	

	DAILY LOG HOURS)  y Total Mileage Today	(Month) (Day) (Year) Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 77021	RECAP Complete at and of workday. On-duty hours today. (Total lines 3 & 4) 70 Hourr/8 Day Drivers
Truck/Tractor and Tra		La Lillo	Total hours on
License Plate(s) / State		Driver's Full Signature Co-Driver's Name	uty last 7 days. neluding today.
1. OFF DUTY 2. SLEEPER BERTH	3 4 5 6 7	**************************************	Total hours available tomorrow.
3. DRIVING 4. ON DUTY (NOT DRIVING)			5775 Total hours on uty last 8 days, accluding today.
REMARKS TO THE PROPERTY OF THE	3 4 5 6 7	7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 	7 Day Drivers
		du	fotal hours on uty last 6 days icluding today.
SHIPPING DOCUMENTS:		3 .7.8.09	Total hours available tomorrow. 0 hr. minus A.*
B/L or Manifest No.		601-L (-) du inc	Cotal hours on uty last 7 days. neluding today.
Shipper & Commodity From:	Enter name of place ye	you reported and where released from work and when and where each change of duty occurred.	34 consecutive hours off duty. you have 60/70
rioin:	USE TIME	ho	you nave 60/70 nours available again.

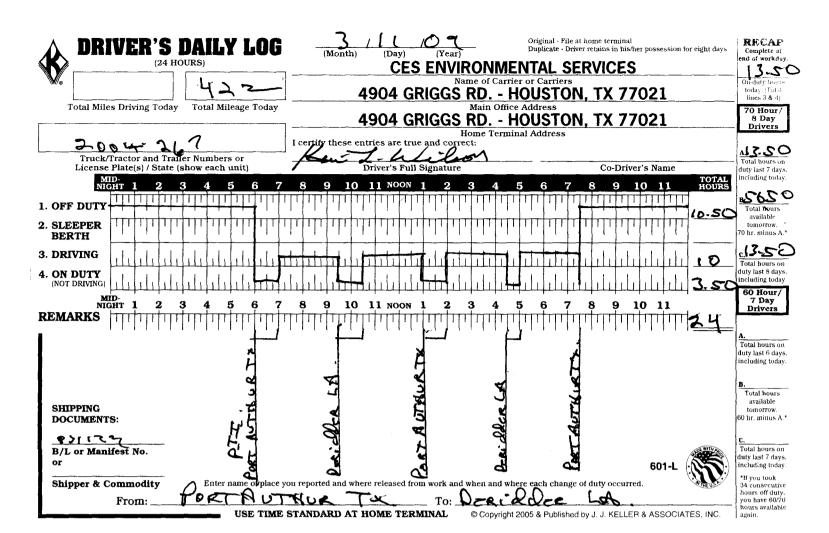
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):
	MBB mechanical breakdown.	ciency in this motor vehicle as would be likely to affect the safety of its operation or result in its
e e e e e e e e e e e e e e e e e e e	I detect the following detect	ects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or eakdown.
4- 2- 3		
	Indicate whether detects are on II	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
3 2		
	DRIV	/ER'S SIGNATURE:
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
	MECHAN	IIC'S SIGNATURE:
	DRIV	ER'S SIGNATURE:  © Copyright 2003 & Published by J. J. KELLER & ASSOCIATES, INC.



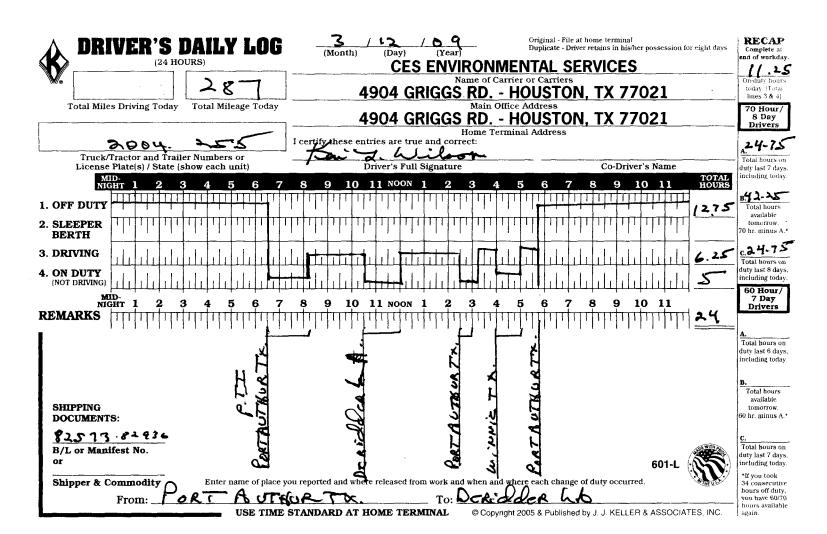
DATE: 3-9-09	TRACTOR/TRUCK NO.:	2004	TRAILER(S) NO.(S):	266	
APPROPR-ATE CHECK	mechanical breakdown.			e safety of its operation or resu	
Indic	ate whether defects are on T	RACTOR/TRUCK or TRAILER	R - Use sufficient detail to loc	ate for mechanic.	
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			•		
	DRIV	/ER'S SIGNATURE:		7	•••
☐ Above	defects corrected	☐ Above defects	need not be corrected for sa	fe operation of vehicle	
	MECHAN	NIC'S SIGNATURE:			
		ER'S SIGNATURE:	ASSOCIATES, INC.	·	

DRIVER'S DAILY LOG (24 HOURS)  Total Miles Driving Today  Total Mileage Today	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address  4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address  I certify hasse entries are true and correct:	RECAP Complete at end of workday.  On-duty hours today, (Total ittes 3 & 4)  70 Hour/8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	Total hours on duty last 7 days.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	including today.
1. OFF DUTY 2. SLEEPER BERTH		B. Cal hours available tomorrow.
3. DRIVING 4. ON DUTY (NOT DRIVING)		Total hours on duty last 8 days, including today.
MID-NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers
	LOFFDUTY	Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No.	601-L	C. Total hours on duty last 7 days, including today. *If you took
	rou reported and where released from work and when and where each change of duty occurred.	34 consecutive hours off duty.
From: USE TIME	To: STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES. INC.	you have 60/70 hours available again.

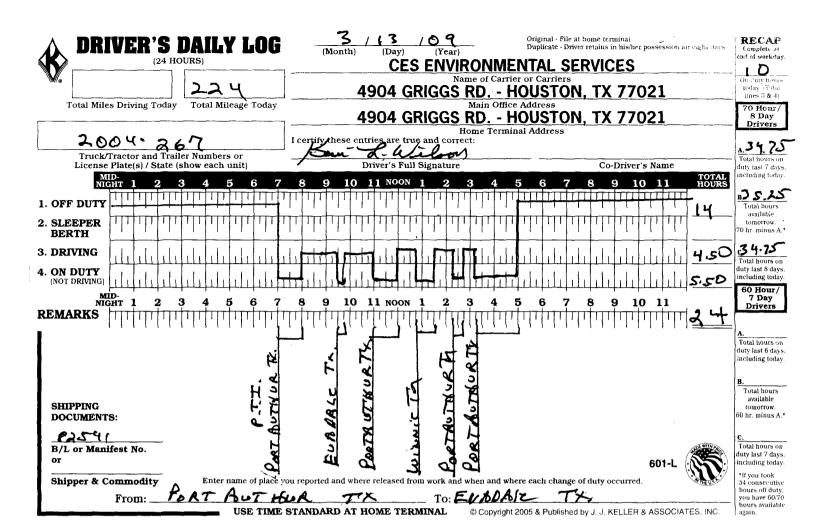
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):
	H B B mechanical breakdown.	ciency in this motor vehicle as would be likely to affect the safety of its operation or result in its extension or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or eakdown.
	Indicate whether defects are on TF	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
*		
	<del></del>	
		'ER'S SIGNATURE:
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
	MECHAN	IIC'S SIGNATURE:
	DRIVE	ER'S SIGNATURE:



DATE: 3. 1	.04	TRACTOR/I	RUCK NO.:	X 65 4			TRAI	LER(S) NO.(	s): <u>~ 6</u>	<u> </u>	
	APPROPRIATE CHECK	detect no comechanical in the result in its n	oreakdown.				to Artist 1				
	in.	dicate whether defe	ects are on <b>TI</b>	RACTOR/	TRUCK or	<b>TRAILER</b>	- Use suffic	ient detail to	locate for me	chanic.	
			. <b>6</b> 5 2								
			4 :				n . 4	•			
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		<del></del>			<u>.</u>	<del></del> _			<u> </u>		
					<del></del>					<del></del>	
			DRIV	ER'S SIC	NATURE:	K	* *	· .			<u> </u>
	□ Abo	ve defects correcte	ed	-	□ Above	/ defects n	eed not be	corrected for	safe operation	n of vehicle	
			MECHAN	IIC'S SIG	NATURE: _	<del></del>		. *	:		
			DRIV	ER'S SIG	NATURE: 8 & Published by J.	J KELLER & A	SSOCIATES INC				



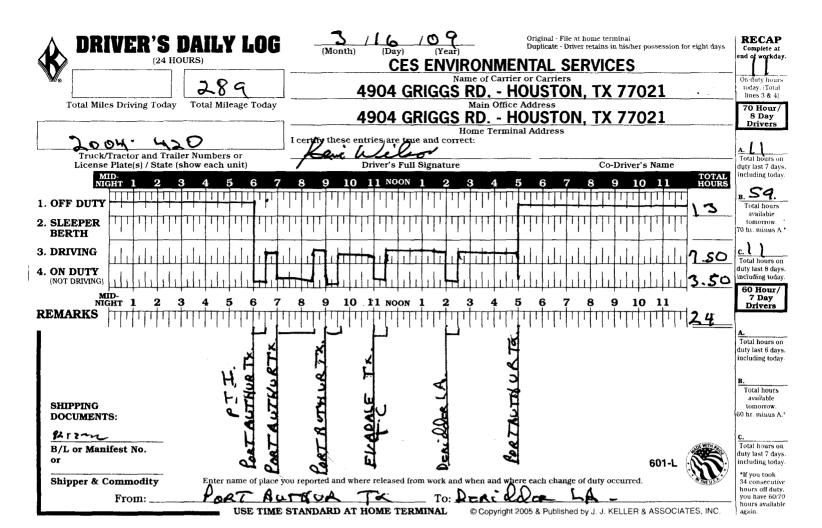
DATE: 3 12-09 TRACTOR/TRUCK	NO.: 2009	TRA	ILER(S) NO.(S):	222
C R H O B E P O C R	or deficiency in this moto own.	or vehicle as would be li	kely to affect the safe	ty of its operation or result in its
	ng defects or deficiencies nical breakdown.	s in this motor vehicle a	s would be likely to aff	fect the safety of its operation o
Indicate whether defects are	e on TRACTOR/TRUCK	or TRAILER - Use suffic	cient detail to locate for	r mechanic.
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	DRIVER'S SIGNATUR	E: Sur		<u> </u>
☐ Above defects corrected	□ Abo	ove defects need not be	corrected for safe ope	eration of vehicle
ME	ECHANIC'S SIGNATURE			<u> </u>
•	DRIVER'S SIGNATURE © Copyright 2003 & Published	by J. J. KELLER & ASSOCIATES, INC		



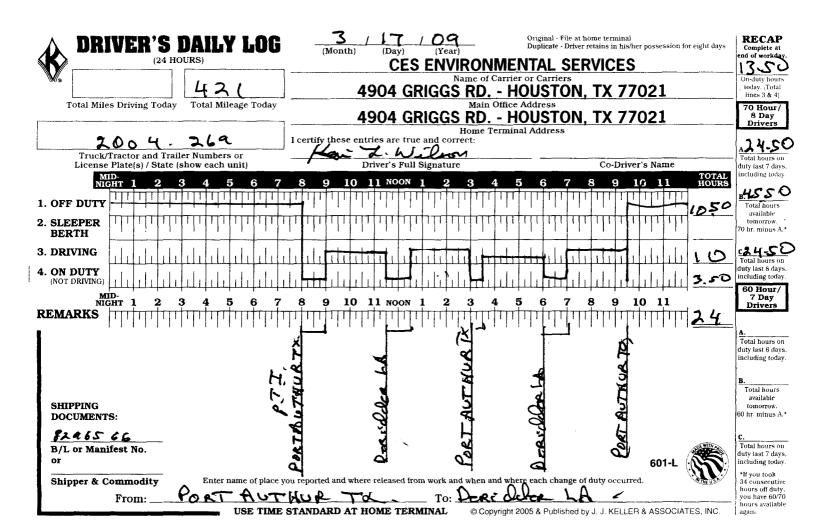
DATE: 3. 13	3.09	TRACTOR/TRUCK NO	).: 2004	TRAII	LER(S) NO.(S): 26	
	APPROPR- CHEC	detect no defect or demechanical breakdown	eficiency in this motor vehic	le as would be lik	cely to affect the safety of its o	peration or result in its
	KAT	☐ I detect the following of result in its mechanical	lefects or deficiencies in this breakdown.	motor vehicle as	would be likely to affect the sa	afety of its operation or
	Indi	cate whether defects are or	TRACTOR/TRUCK or TRA	ILER - Use suffici	ent detail to locate for mechani	c.
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				e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de l		
		D	RIVER'S SIGNATURE:			
	☐ Above	e defects corrected	☐ Above def	ects need not be	corrected for safe operation of	vehicle
		MECH	IANIC'S SIGNATURE:			
		DF	RIVER'S SIGNATURE:	FR & ASSOCIATES INC		

78.40	DAILY LOG		Carriers	RECAP Complete at end of workday On-duty hours today, (Total
Total Miles Driving Tod  Truck/Tractor and T  License Plate(s) / Sta	railer Numbers or	Main Office Addr 4904 GRIGGS RD HOU Home Terminal Ad I certify these entries are true and correct: Driver's Full Signature	ess STON, TX 77021	70 Hour/8 Day Drivers  A. Total hours on duty last 7 days
MID- NIGHT 1 2	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5	6 7 8 9 10 11 TOTAL HOURS	including today
1. OFF DUTY 2. SLEEPER BERTH			24	Total hours available tomorrow. 70 hr. minus A.
3. DRIVING 4. ON DUTY				c. Total hours on duty last 8 days
(NOT DRIVING)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			60 Hour/ 7 Day Drivers  A. Total hours on duty last 6 days
		LOFF DUTY		including today
SHIPPING DOCUMENTS:		3.14.15.09		B. Total hours available tomorrow. 60 hr. minus A.
B/L or Manifest No. or			601-L	C. Total hours on duty last 7 days including today
Shipper & Commodity From:	Enter name of place y	ou reported and where released from work and when and where each To:	th change of duty occurred.	*If you took 34 consecutive hours off duty, you have 60/70

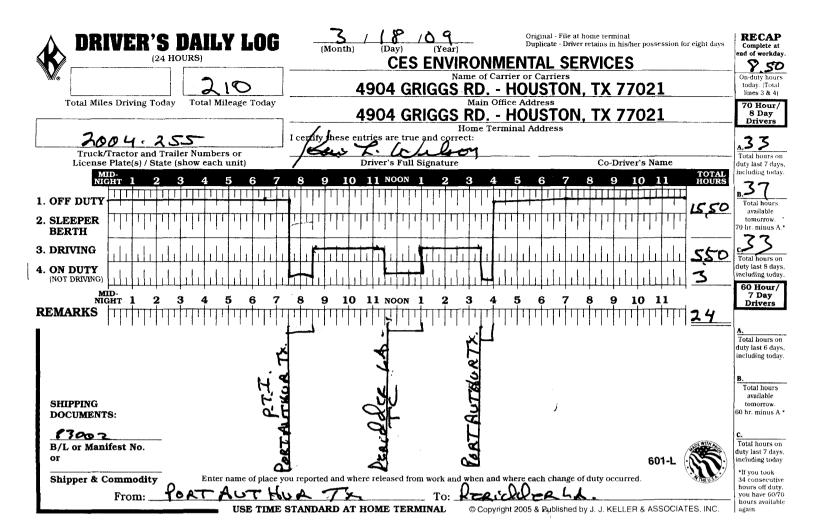
DATE:	TRACTOR/TRUCK NO.:		TRAILER(S) NO.(S):	
	A I detect no defect or defice to the first term of the first term	ciency in this motor vehicle as woul	d be likely to affect the safety of its operation	or result in its
	I detect the following defe	ects or deficiencies in this motor veh reakdown.	nicle as would be likely to affect the safety of its	s operation o
			e sufficient detail to locate for mechanic.	
		•		
		·		
			·	
	DRIV	/ER'S SIGNATURE:		
	☐ Above defects corrected	☐ Above defects need	not be corrected for safe operation of vehicle	
	MECHAN	NIC'S SIGNATURE:		
	DRIV	ER'S SIGNATURE:  © Copyright 2003 & Published by J. J. KELLER & ASSOCIA	TES, INC.	



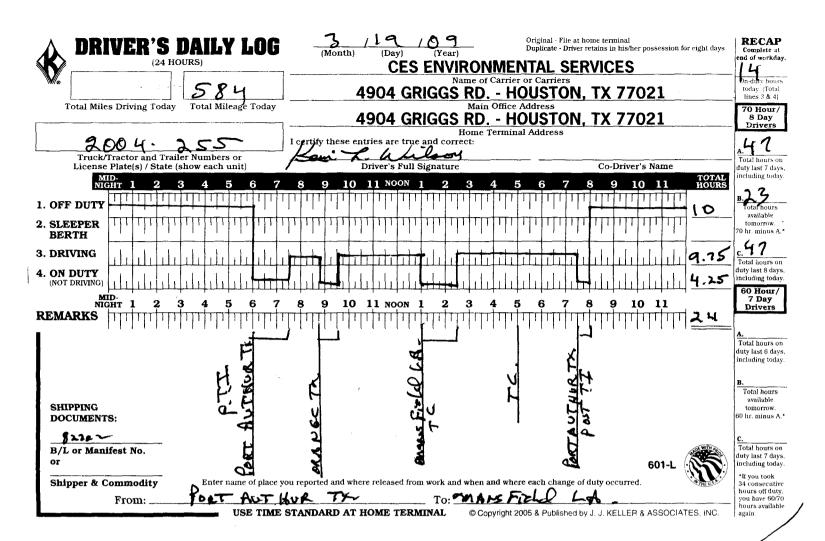
DATE: 3	3 16.09	_ TRACTOR/TRUC	K NO.: 26	004		TRAILI	ER(S) NO.(S): 2	9	
·	APPROPR- CHEC	detect no defect mechanical break	t or deficiency down.	in this motor v	vehicle as wo	ould be like	ly to affect the safe	ly of its operation or re	sult in its
e e	K A T E	☐ I detect the follow result in its mechanic	ving defects or anical breakdov	deficiencies ir vn.	this motor v	ehicle as v	vould be likely to aff	ect the safety of its ope	eration o
	t e e			DEDUCK	TDAUED 1	l	*	manata auto	
	inaid	cate whether defects a	are on IHACIC	OH/THUCK or	I HAILER - U	Jse sumicie	nt detail to locate for	mecnanic.	
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				<u> </u>	* .				
			* *	,	4		2~		
			DRIVER'S	SIGNATURE:	K		-		
	☐ Above	defects corrected	• •	□ Above	/ e defects nee	d not be co	orrected for safe ope	ration of vehicle	
		<b>N</b>	MECHANIC'S S	IGNATURE: _					
		a dep	DRIVER'S S	IGNATURE: _			- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	and the second s	



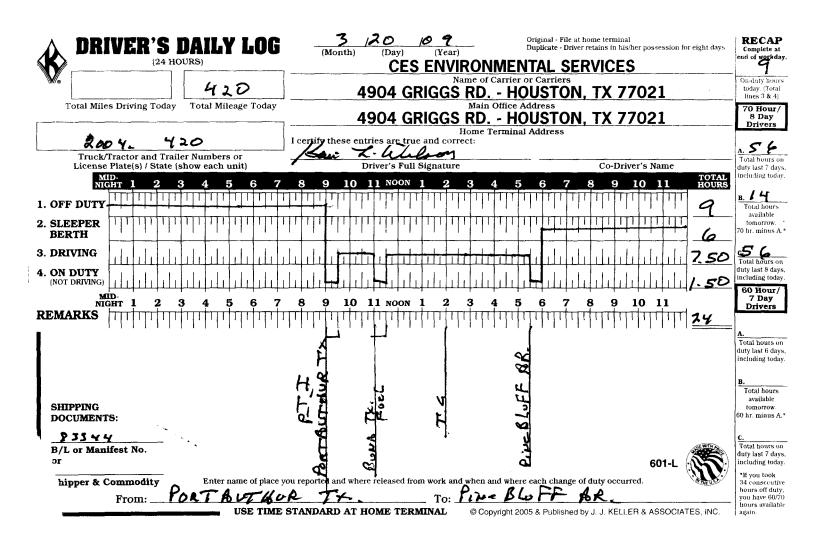
DATE: 3	17.0 9	_ TRACTOR/TF	RUCK NO.:	2004		TRAILER(S)	10.(S): <u>ス6</u>	
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	K A T E	☐ I detect the for result in its me	llowing defectechanical breat	ts or deficient akdown.	cies in this moto	r vehicle as would b	e likely to affect the	safety of its operation of
	Indi	cate whether defec	ts are on <b>TR</b>	ACTOR/TRUC	K or TRAILER	- Use sufficient deta	I to locate for mecha	nic.
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			DRIVE	R'S SIGNATI	JRE:			
	☐ Above	e defects corrected			Above defects n	eed not be corrected	I for safe operation o	f vehicle
			MECHANI	C'S SIGNATU	RE:			
			DRIVE	R'S SIGNATU	RE:	SSOCIATES INC		



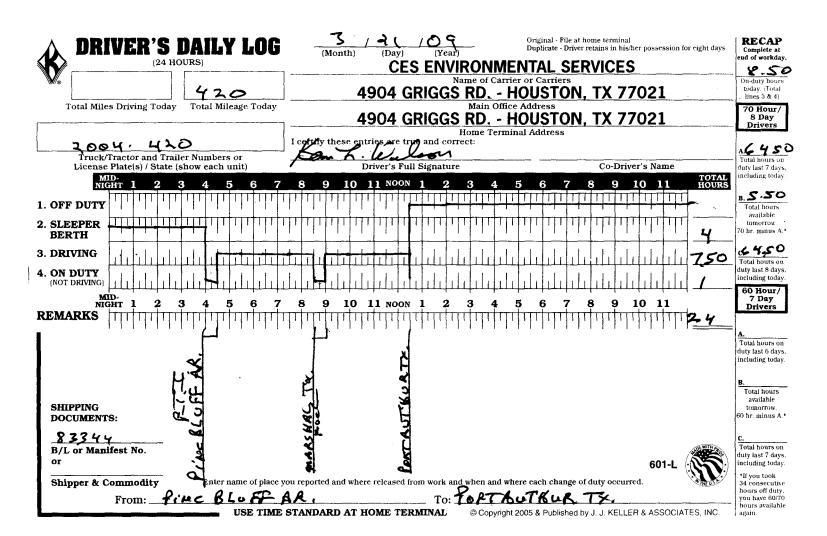
DATE: 3-1889	1889 TRACTOR/TRUCK NO.: 2004			TRAILER(S) NO.(S): 255				
4 P P R O P R O P R O P R O P R O P R O P R O P R O P R O P R O P R O P R O P P P P	detect no defect or mechanical breakdow	deficiency in this	motor vehicle as wo	uld be likely to affect the	safety of its operation or result	in its		
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indica	ate whether defects are t	on INACION/INC	JCK or TRAILER - U	se sumcient detail to locati	e for mechanic.			
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		DRIVER'S SIGNA	TURE:					
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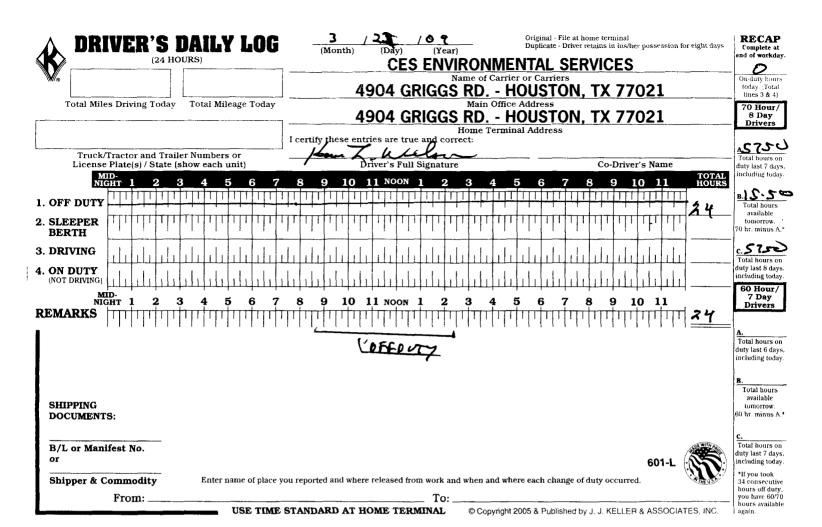
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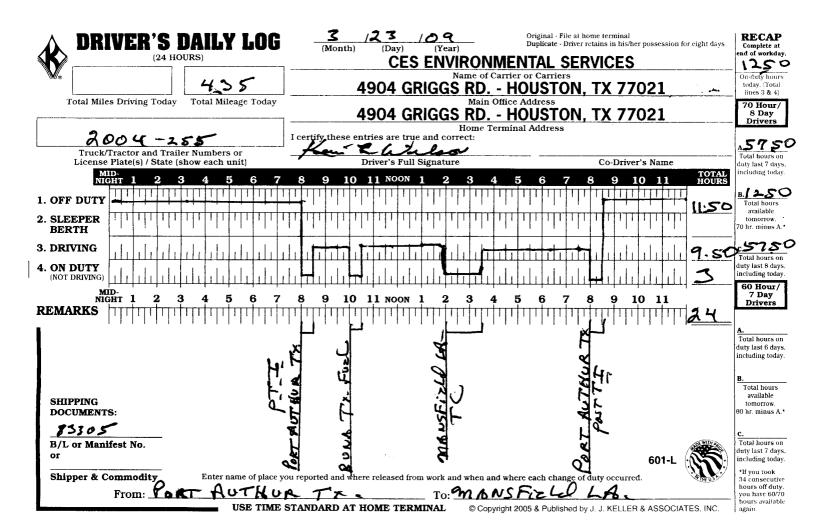
DATE:3.20.0 9	TRACTOR/TRUCK NO.: _200	TRAILER(S	) NO.(S): 2,2 0	
APPROPER-4TI BOX	Thechanical breakdown.	this motor vehicle as would be likely to		
E Indic		I/TRUCK or TRAILER - Use sufficient de	tail to locate for mechanic.	
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	MECHANIC'S SIG	· 3	A	
	DRIVER'S SIG	SNATURE:		



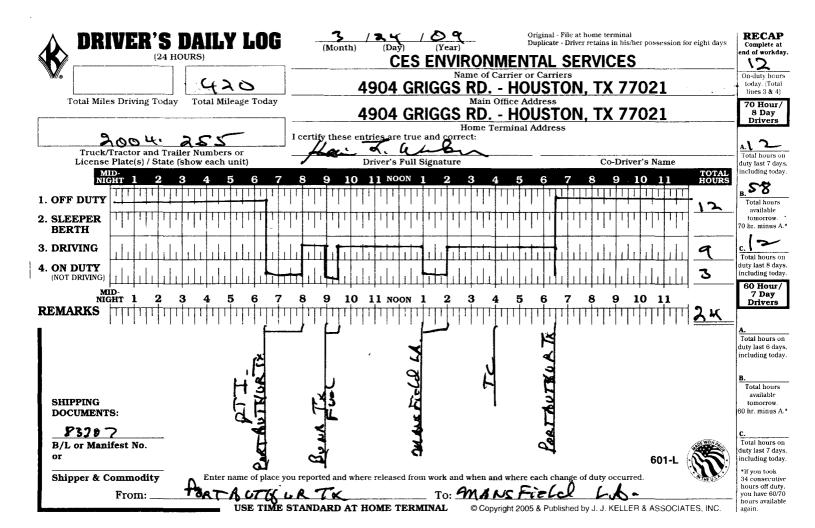
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	☐ Above defects corrected	☐ Above defects n	eed not be corrected	for safe operation of vehic	ole
	MECHAN	IIC'S SIGNATURE:			
	DRIV	ER'S SIGNATURE:  © Copyright 2003 & Published by J. J. KELLER & AS			



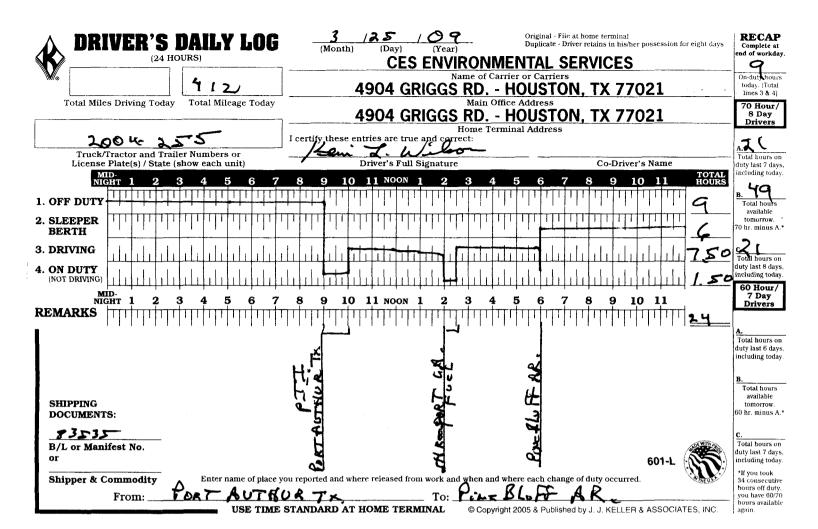
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):
ŵ.	P ☐ I detect no defect or defice H O B ☐ Mechanical breakdown.	ciency in this motor vehicle as would be likely to affect the safety of its operation or result in its
		ects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or eakdown.
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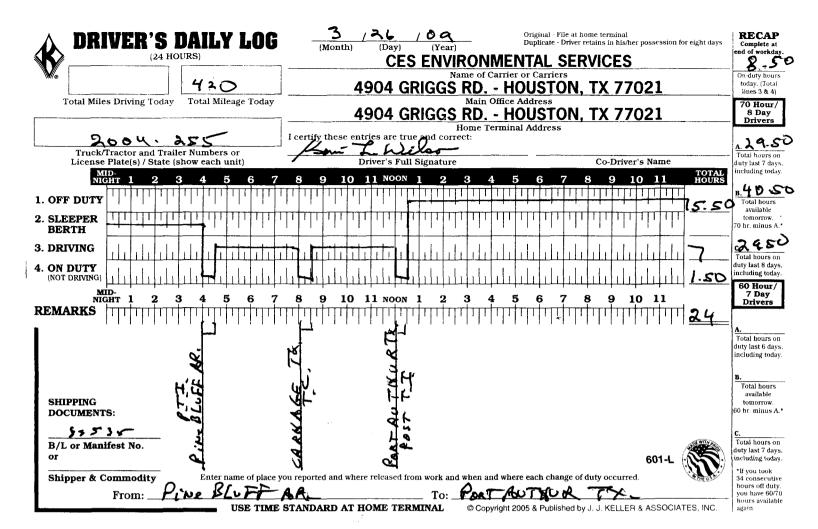
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	indi	- icate whether defects are on	TRACTOR/TRUCK or TRA	ILER - Use sufficient detail to locate for	or mechanic.
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	☐ Abov	e defects corrected	☑ Above def	octs need not be corrected for safe op	eration of vehicle
		MECH	ANIC'S SIGNATURE:		
		DR	IVER'S SIGNATURE:	LED & ACCOCIATES INC.	<u>⊅e.e^`</u> 



DATE: 3	24-09	_ TRACTOR/TR	UCK NO.: _	208	4	TRAIL	ER(S) NO.(S):	255	
	APPROPR- CHEC	detect no def mechanical bre	fect or deficie eakdown.	ncy in this	s motor vehic	le as would be lik	ely to affect the	safety of its operatio	n or result in its
M.	K A T E	☐ I detect the fol result in its me	lowing defect chanical brea	s or deficie kdown.	encies in this	motor vehicle as	would be likely	to affect the safety of	its operation or
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			DRIVE	R'S SIGNA	ATURE:				
	☐ Above	e defects corrected	·	ţ	☐ Above defe	ects need not be o	corrected for safe	e operation of vehicle	
			MECHANIC	'S SIGNA	TURE:	<del></del>		190 m	
				R'S SIGNA pyright 2003 & P		LER & ASSOCIATES, INC.			



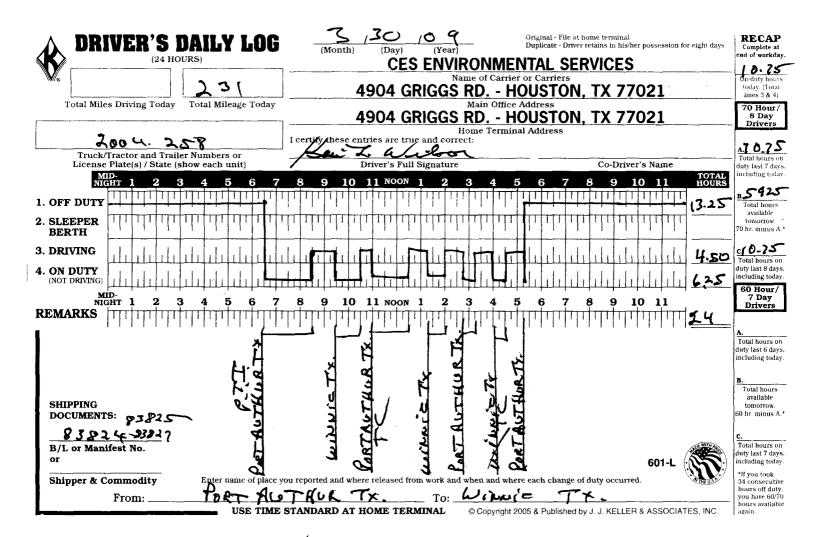
DATE: 3 12 5	TRACTOR/TRUC	CK NO.: <u>100</u>	4	TRAILER(S) NO.(S)	: <u>722</u>	
.:	mechanical breat	kaown. wing defects or	deficiencies in this r		ne safety of its operation or result in	
F 41	result in its mech	anical breakdov	vn.		,	
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	☐ Above defects corrected		☐ Above defec	cts need not be corrected for s	afe operation of vehicle	
		MECHANIC'S S	IGNATURE:	S. •		
		DRIVER'S S	IGNATURE:	R & ASSOCIATES INC		



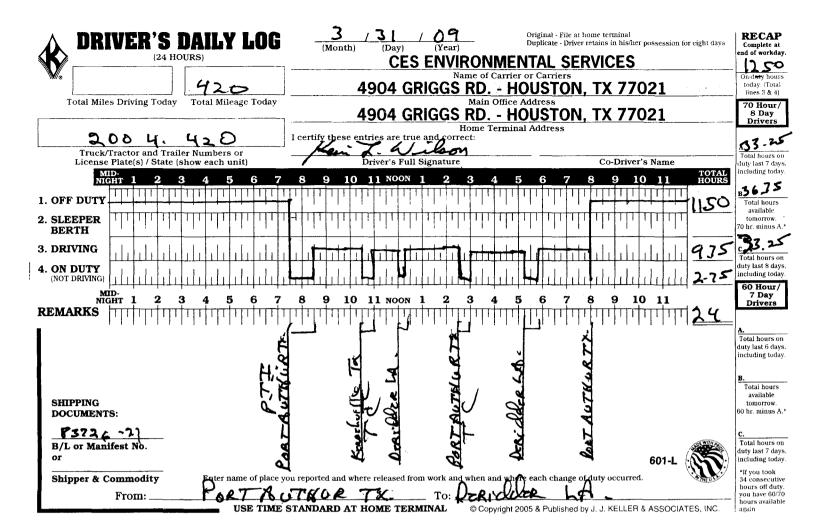
DATE: 3-2	TRACTOR/TRUC	ck no.: 2004	TRAIL	ER(S) NO.(S): 42 2	
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		DRIVER'S SIGNATURE:	14	• • • • • • • • • • • • • • • • • • •	<u></u>
	☐ Above defects corrected	☐ Above	efects need not be co	orrected for safe operation of vehi	cle
	, ,	MECHANIC'S SIGNATURE:			
		DRIVER'S SIGNATURE:		a de la lación de la companyone de la companyone de la companyone de la companyone de la companyone de la comp	

/ILA/\	DAILY LOG		Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days	RECAP Complete at end of workday
Total Miles Driving Tod	ay Total Mileage Today	4904 GRIGGS RD. 4904 GRIGGS RD.	Carrier or Carriers - HOUSTON, TX 77021 Office Address - HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)  70 Hour/ 8 Day Drivers
Truck/Tractor and T License Plate(s) / Stat MID-	railer Numbers or te (show each unit)	I certify these entries are true and correct:  Driver's Full Signature	Co-Driver's Name  Co-Driver's Name  TOTAL HOURS	Total hours or duty last 7 days including today
1. OFF DUTY 2. SLEEPER BERTH	3 4 5 6 7	8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 HŎÜRS	B. 48 50 Total hours available tomorrow. 70 hr. minus A.
3. DRIVING 4. ON DUTY (NOT DRIVING)				Total bours or duty last 8 days including today
REMARKS   1 2	3 4 5 6 7	8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 	7 Day Drivers  A. Total hours on
		LEFRUTY .		duty last 6 days including today  B.  Total hours available
SHIPPING DOCUMENTS:  B/L or Manifest No.		3. 27-28-29-09	OF WITH CA	tomorrow. 60 hr. minus A.  C. Total hours on
Shipper & Commodity From:	- ·	u reported and where released from work and when a  To:  STANDARD AT HOME TERMINAL © Cor	and where each change of duty occurred.	duty last 7 days including today "If you took 34 consecutive hours off duty you have 60/7/ hours available again.

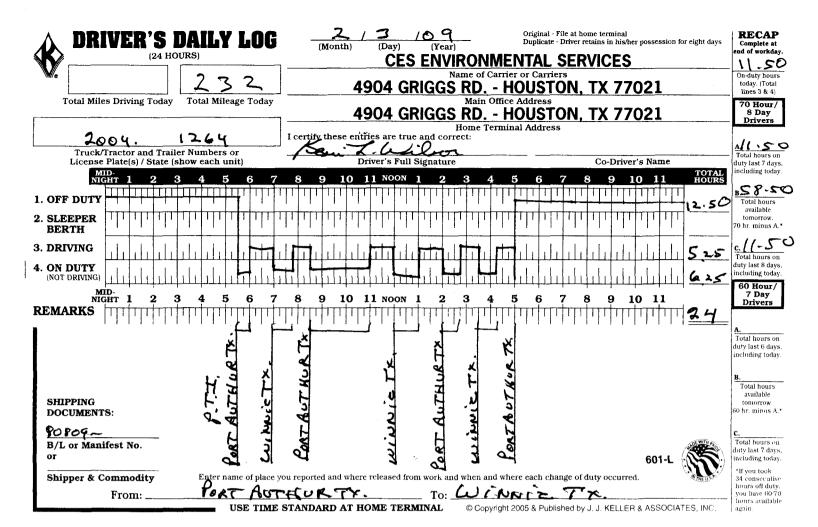
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):
	HOB mechanical breakdown.	ciency in this motor vehicle as would be likely to affect the safety of its operation or result in its ects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or eakdown.
ï	Indicate whether defects are on Ti	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
Ç.4.		
		/ER'S SIGNATURE:
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
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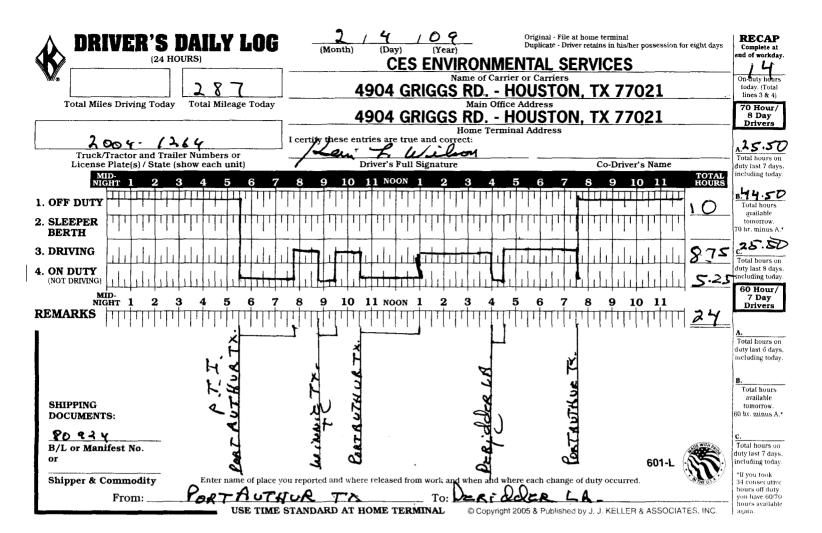
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5 1 C	owing defects or deficiencies in thi hanical breakdown.	s motor vehicle as w	vould be likely to af	fect the safety of its operatio
Indicate whether defects	are on TRACTOR/TRUCK or TR	AILER - Use sufficier	nt detail to locate fo	r mechanic.
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☐ Above defects corrected	DRIVER'S SIGNATURE: Above de	efects need not be co	rrected for safe ope	eration of vehicle
	MECHANIC'S SIGNATURE: DRIVER'S SIGNATURE:			



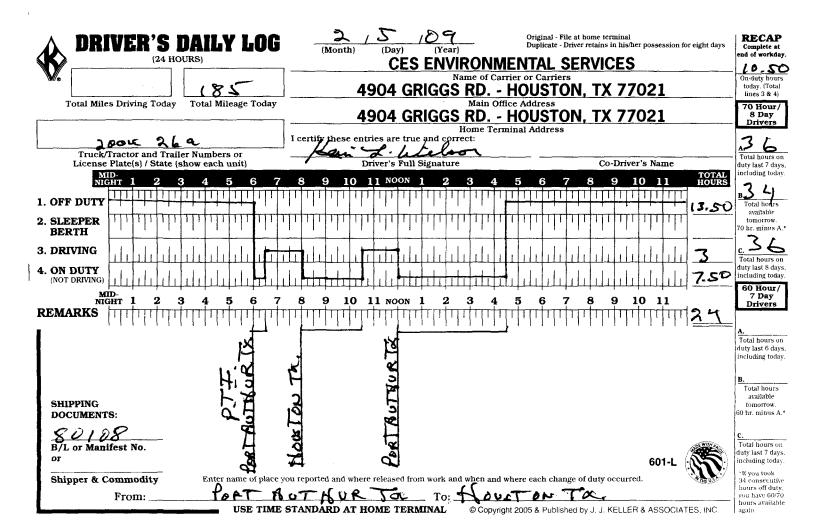
DATE:	3.31.0.	TRACTOR/TRU	CK NO.:	004		TRAILER(S) NO.(	s): <u>420</u>	
	APPROPR- CHUC	detect no defect mechanical brea	et or deficiency kdown.	in this moto		ld be likely to affect	the safety of its or	peration or result in its
	GRX KAT E	☐ I detect the follow result in its mech	wing defects of anical breakdo	r deficiencie own.	s in this motor vel	hicle as would be lik	ely to affect the sa	fety of its operation or
	Indi	cate whether defects	are on <b>TRACT</b>	OR/TRUCK	or <b>TRAILER</b> - Use	e sufficient detail to I	ocate for mechanic	
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			DRIVER'S	SIGNATUR	E: //			
	☐ Abov	e defects corrected	•	□ Ab	ove defects need	not be corrected for	safe operation of v	ehicle
		ı	MECHANIC'S	SIGNATURE	<b>:</b>			
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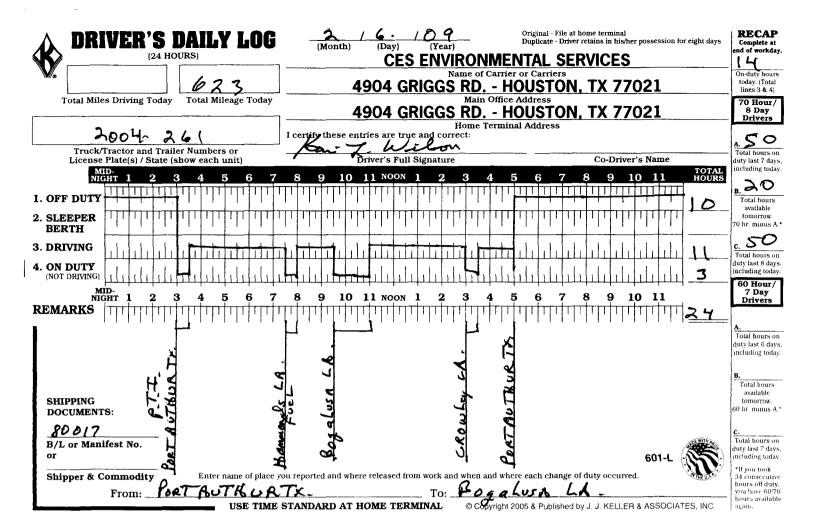
DATE - 5-0 9	TRACTOR/TRUCK NO.: 2 00 4 TRAILER(S) NO.(S): 12 6 4
APPHOPH. CHECK	I detect no defect or deficiency in this motor vehicle as would be likely to affect the safety of its operation or result in its mechanical breakdown.
T E	I detect the following defects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or result in its mechanical breakdown.
·	ndicate whether defects are on TRACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
	• • * * * * * * * * * * * * * * * * * *
	DRIVER'S SIGNATURE:
□ Ab	ove defects corrected
	MECHANIC'S SIGNATURE:
	DRIVER'S SIGNATURE:



DATE: _	2.4.09	TRACTOR/TRUCK NO.:	: 2004	TRAILER(S	S) NO.(S):	6 8
	APPROPRIATION OF THE CK	detect no defect or def mechanical breakdown.	ficiency in this motor vehicle	as would be likely to	affect the safety of its op	eration or result in its
	K A T E	☐ I detect the following de result in its mechanical b	fects or deficiencies in this moreakdown.	otor vehicle as would	d be likely to affect the saf	ety of its operation or
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		DRI	IVER'S SIGNATURE:	like		
	☐ Abov	re defects corrected	☐ Aboye defect	s need not be correc	ted for safe operation of ve	hicle
		MECHA	NIC'S SIGNATURE:			
		DRIN	VER'S SIGNATURE: © Copyright 2003 & Published by J. J. KELLER	& ASSOCIATES, INC.	*	



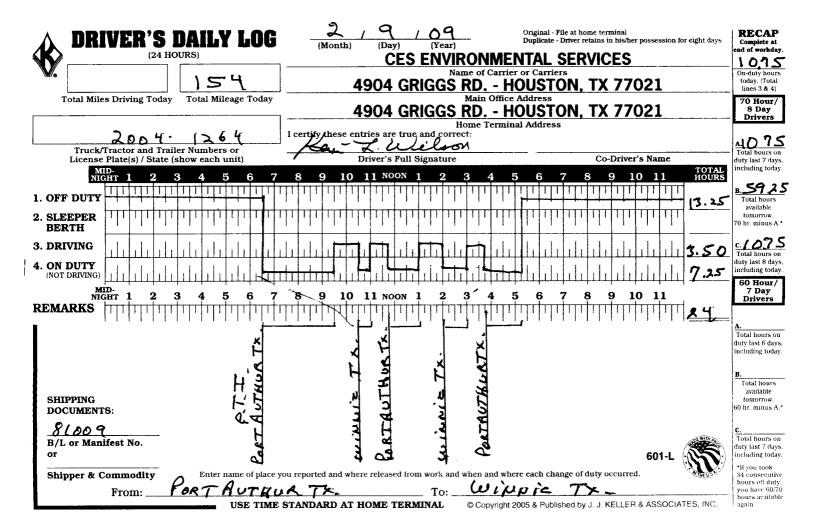
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<b>E</b>	result in its mechanical breakt	down.					
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	MECHANIC'S	S SIGNATURE:					
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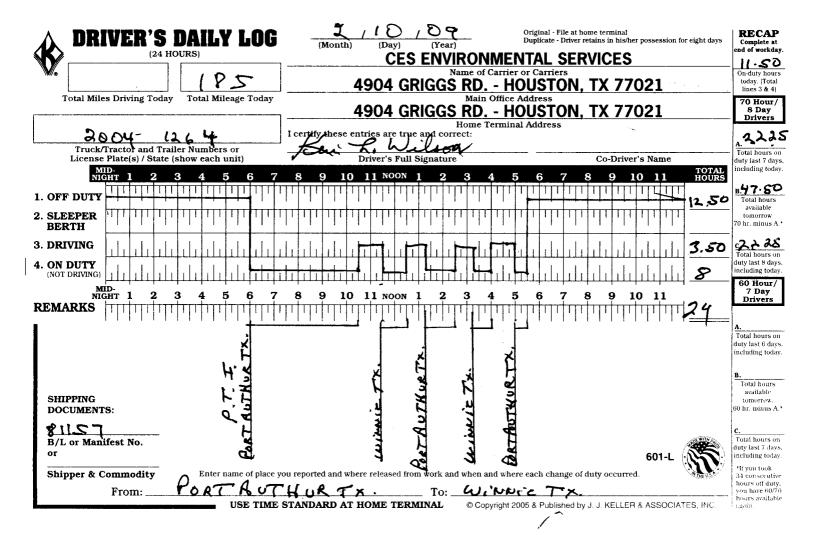
DATE: 2. 6-0 9	_ TRACTOR/TRUCK NO.: _	2004		TRAILER(S) NO.(S	s): <u>26 (</u>	
APPEOPE-4 CHECK	nechanical breakdown.	ncy in this motor	vehicle as would	be likely to affect	the safety of its ope	eration or result in its
CHX KAT E	☐ I detect the following defect result in its mechanical brea	s or deficiencies ikdown.	in this motor vehic	cle as would be like	ely to affect the safe	ety of its operation or
Indic	cate whether defects are on TRA	CTOR/TRUCK o	r <b>TRAILER</b> - Use :	sufficient detail to lo	ocate for mechanic.	
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	DRIVE	R'S SIGNATURE			· · · · · · · · · · · · · · · · · · ·	
☐ Above	defects corrected	☐ Abo	ve defects need no	ot be corrected for s	safe operation of ve	hicle
	MECHANIC	"S SIGNATURE:				-
	DRIVER	'S SIGNATURE:	A LACTURE A ACCOUNT			

	DAILY LOG	Name of 4904 GRIGGS RD.	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  IMENTAL SERVICES  Carrier or Carriers  - HOUSTON, TX 77021	RECAP Complete at end of workday. On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Toda  Truck/Tractor and Truc	I c	4904 GRIGGS RD.	Office Address - HOUSTON, TX 77021  Terminal Address  Co-Driver's Name	70 Hour/ 8 Day Drivers  A. SO  Total hours on duty last 7 days,
1. OFF DUTY 2. SLEEPER BERTH	3 4 5 6 7 8		4 5 6 7 8 9 10 11 TOTAL HOURS	B. 20 Total hours available tomorrow. 70 hr. minus A.*
3. DRIVING 4. ON DUTY (NOT DRIVING) NIGHT 1 2 REMARKS	3 4 5 6 7 8	3 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11	C. SO Total hours on duty last 8 days, including today.  60 Hour/ 7 Day Drivers
		LEFFAUTY 2-7-8-09		A. Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		2.7.8.09		Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No. or Shipper & Commodity From:		eported and where released from work and when a  To:  ANDARD AT HOME TERMINAL  © Cot	and where each change of duty occurred.	Total hours or duty last 7 days, including today.  *If you took 34 consecutive hours off duty, you have 60/70 hours available again

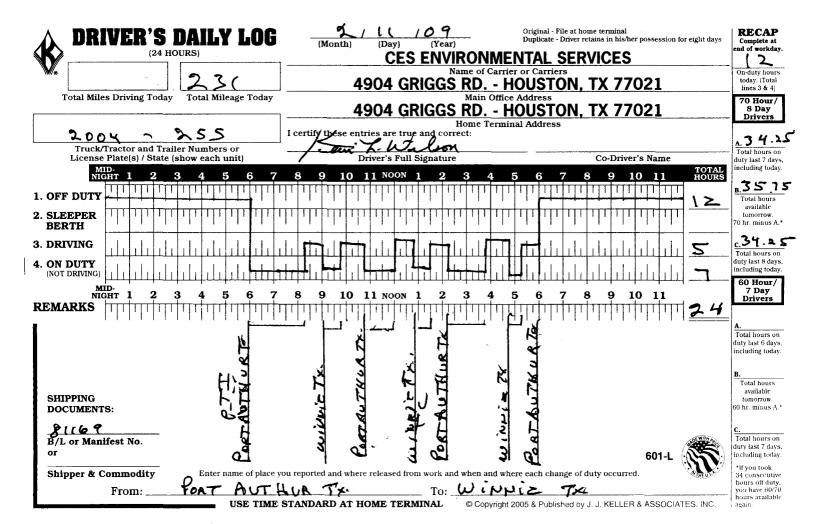
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):
	HOB mechanical breakdown.	ciency in this motor vehicle as would be likely to affect the safety of its operation or result in its
	result in its mechanical broad	eakdown.
	Indicate whether defects are on Ti	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
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	DRIV	/ER'S SIGNATURE:
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
	MECHAN	IIC'S SIGNATURE:
	DRIVI	ER'S SIGNATURE:



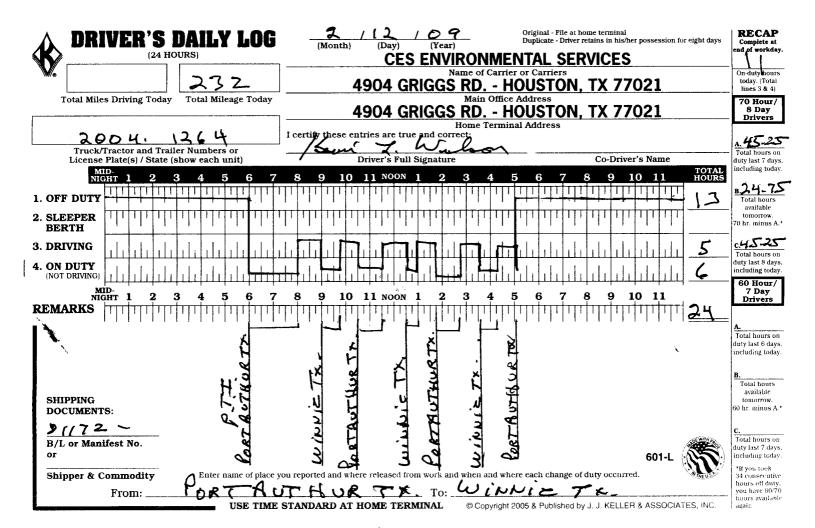
DATE:	4.0 7	_ TRACTOR/TRUCK	no.: <u>20</u>	07		TRAILER(S	NO.(S): 82	(8	
	APPROPRIAT CHECK	detect no defect of mechanical breakdo	r deficiency in wn.	this motor	vehicle as would	d be likely to	affect the safet	y of its operation	n or result in its
	K A T E	☐ I detect the following result in its mechani	g defects or d cal breakdowr	eficiencies ir n.	n this motor veh	nicle as would	be likely to aff	ect the safety of	its operation or
,	Indi	cate whether defects are	on TRACTOF	R/TRUCK or	TRAILER - Use	sufficient de	tail to locate for	mechanic.	
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							. :		
			DRIVER'S SI	GNATURE:	1/_				
	☐ Above	e defects corrected		☐ Above	e defects need r	not be correct	ed for safe ope	ration of vehicle	
		ME	CHANIC'S SIG	GNATURE: _					
		ļ	DRIVER'S SIO		. J. KELLER & ASSOCIA	TES, INC.			



DATE: 名	10.09 TRACTOR/TRUCK NO.: 2004 TRAILER(S) NO.(S): 1264
i e je	detect no defect or deficiency in this motor vehicle as would be likely to affect the safety of its operation or result in its mechanical breakdown.
the size	I detect the following defects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation of result in its mechanical breakdown.
	Indicate whether defects are on TRACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
<del></del>	• • • • • • • • • • • • • • • • • • •
	DRIVER'S SIGNATURE
	☐ Above defects corrected ☐ Above defects need not be corrected for safe operation of vehicle
	MECHANIC'S SIGNATURE:
	DRIVER'S SIGNATURE:



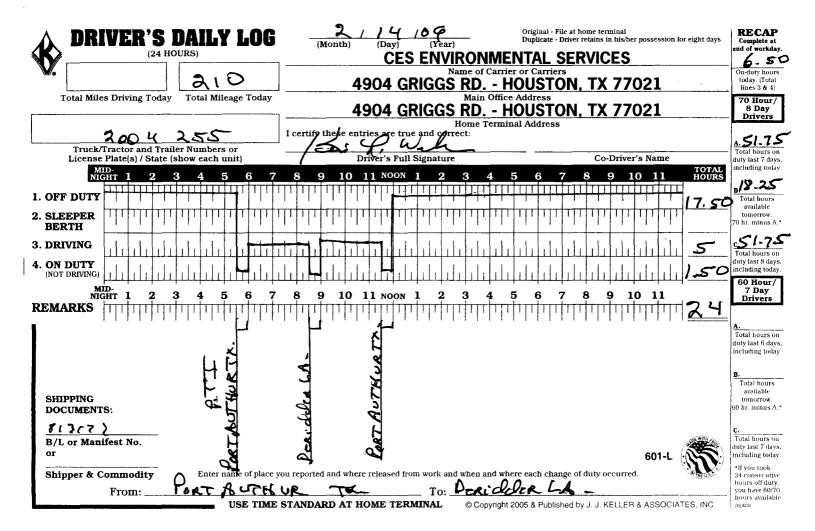
DATE: 2. /( · D 9	TRACTOR/TRUCK NO.:	2004	TRAILER(	S) NO.(S):	255	
APPROPR BO CHEC	detect no defect or deficie mechanical breakdown.	ncy in this motor vehicle	as would be likely to	affect the safet	y of its operation or resul	t in its
K A T E	☐ I detect the following defect result in its mechanical brea	s or deficiencies in this m kdown.	otor vehicle as woul	d be likely to affe	ect the safety of its opera	tion or
	ndicate whether defects are on TRA	CTOR/TRUCK or TRAILE	ER - Use sufficient d	etail to locate for	mechanic.	
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<b>4</b> at						
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	DRIVE	R'S SIGNATURE:				
□ Ab	ove defects corrected	☐ Above defect	s need not be correct	cted for safe oper	ation of vehicle	
	MECHANIC	'S SIGNATURE:				
	DRIVER	'S SIGNATURE:	**			



DATE - 12 Y	99 TRACTOR/TRUCK NO.: 2084	TRAILER(S) NO.(S): _	1264
C H C E C F F F	Detect no defect or deficiency in this motors mechanical breakdown.	or vehicle as would be likely to affect the s	safety of its operation or result in its
C F K A T E	☐ I detect the following defects or deficiencies	s in this motor vehicle as would be likely to	affect the safety of its operation or
	Indicate whether defects are on TRACTOR/TRUCK	or TRAILER - Use sufficient detail to locate	e for mechanic.
·	•	<del></del>	<u> </u>
. :	E 28	. *	
<del></del>			
		:	got.
	DRIVER'S SIGNATUR	E:	<u> </u>
	Above defects corrected	ove defects need not be corrected for safe	operation of vehicle
	MECHANIC'S SIGNATURE	£	
	DRIVER'S SIGNATURE © Copyright 2003 & Published	by J. J. KELLER & ASSOCIATES, INC.	f

DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight day  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
<b>M.</b>	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today	Main Office Address 4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day
2004. (264	Home Terminal Address I certify these entries are true and correct:	— <u>Drivers</u>
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	Total hours on duty last 7 days.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOUR	RS
1. OFF DUTY 2. SLEEPER	<del>╵┦┍╃╃╃╃╃╃╃╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇</del>	B.2 4 - 7 Total hours available tomorrow.
BERTH ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '		70 hr. minus A.*  CA 5.25  Total hours on
4. ON DUTY (NOT DRIVING)		duty last 8 days, including today.
REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers
	of F puty	Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		B. Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No.	601-L	C. Total hours on duty last 7 days, including today.
From: POAT AUTHU	you reported and where released from work and when and where each change of duty occurred.  To:  STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	*If you took 34 consecutive hours off duty, you have 60/70 hours available

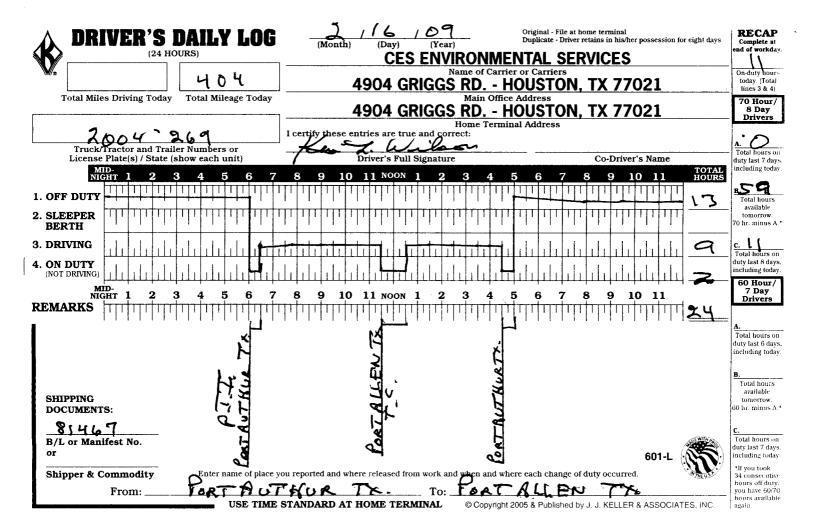
DATE:	TRACTOR/TRUCK NO.: _	TRAILER(S) NO.(S):
	HOB mechanical breakdown. EPO CRX	iency in this motor vehicle as would be likely to affect the safety of its operation or result in its cts or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or eakdown.
	Indicate whether defects are on TF	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
2 1		
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	· ·	· · · · · · · · · · · · · · · · · · ·
		ER'S SIGNATURE:
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
	MECHAN	IC'S SIGNATURE:
	DRIVE	ER'S SIGNATURE:



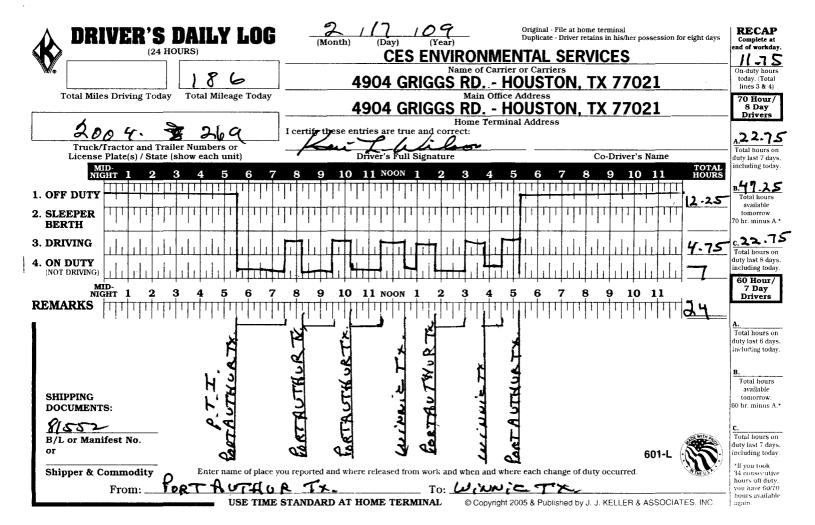
DATE: 2.1	TRACTOR/TRUCK NO	<u>2004</u>	TRAIL	.ER(S) NO.(S):	5
	A DE POCE RX	eficiency in this motor vehicle	as would be lik	ely to affect the safety of	ts operation or result in its
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		efects or deficiencies in this n breakdown.	notor vehicle as	would be likely to affect the	e safety of its operation or
	Indicate whether defects are on	TRACTOR/TRUCK or TRAIL	ER - Use suffici	ent detail to locate for mec	hanic.
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	DF	RIVER'S SIGNATURE:	· :		<u> </u>
	☐ Above defects corrected	☐ Above defed	need not be o	corrected for safe operation	of vehicle
	MECH	ANIC'S SIGNATURE:			
	DR	IVER'S SIGNATURE:	R & ASSOCIATES INC.		

DRIVER'S DAILY (24 HOURS)  Total Miles Driving Today  Total Mileage	CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 77021	RECAP Complete at end of workda On-duty hours today. (Total lines 3 & 4) 70 Hour/8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each uni	Lucison -	Total hours or
MID-	TO	duty last 7 day including today
1. OFF DUTY  2. SLEEPER BERTH		Total hours available tomorrow. 70 hr. minus A
3. DRIVING 4. ON DUTY (NOT DRIVING) MID-		C.S. 7. 7.  Total hours or duty last 8 days including today  60 Hour/ 7 Day
NIGHT 1 2 3 4 5 REMARKS	6 7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	A. Total hours or duty last 6 day including today
SHIPPING DOCUMENTS:		B. Total hours available tomorrow.
B/L or Manifest No. or Shipper & Commodity Enter name	601-L ne of place you reported and where released from work and when and where each change of duty occurred.	Total hours or duty last 7 days including today *If you took 34 consecutiv
From:U	To: SE TIME STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES. IN	hours off duty you have 60/70 hours available NC. again.

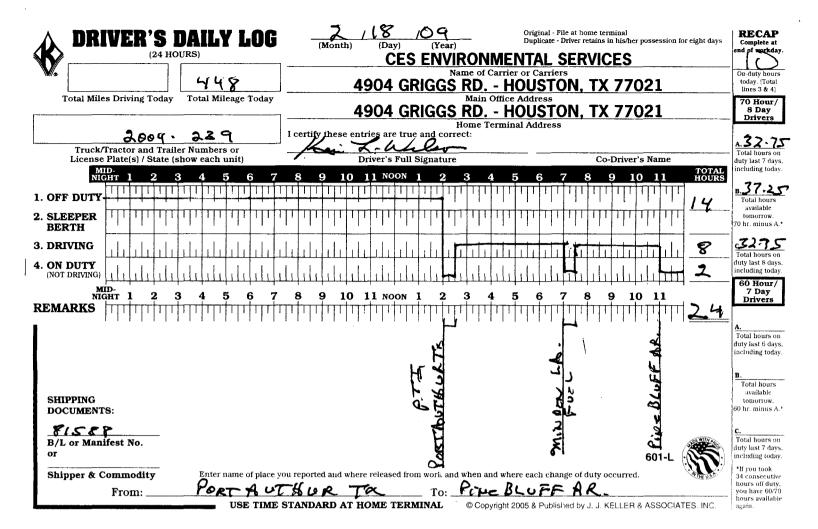
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):
APPROPR-AT BOX	mechanical breakdown.	iciency in this motor vehicle as would be likely to affect the safety of its operation or result in its ects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or
Î	result in its mechanical bi	reakdown.
Ind	licate whether defects are on <b>T</b>	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
	DRI	VER'S SIGNATURE:
☐ Abov	ve defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
	MECHA	NIC'S SIGNATURE:
	DRIV	/ER'S SIGNATURE: © Copyright 2003 & Published by J. J. KELLER & ASSOCIATES, INC.



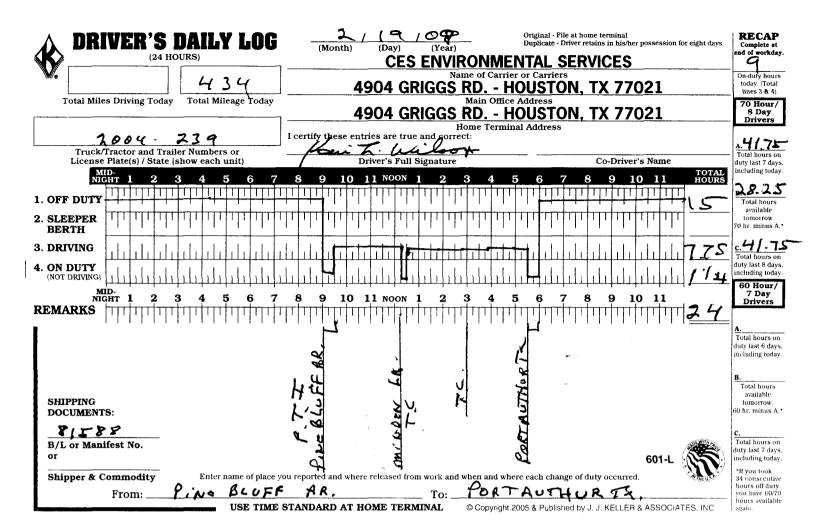
DATE: 2 1/6-09	TRACTOR/TRUCK NO.:	004	TRAILER(S) NO.(S): 2	69
HOPO CR	detect no defect or deficiency in the mechanical breakdown.  I detect the following defects or deficiency in the mechanical breakdown.	is motor vehicle as wo	uld be likely to affect the safety	of its operation or result in its
Indica	te whether defects are on TRACTOR/T	RUCK or TRAILER - U	se sufficient detail to locate for m	echanic.
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TO ME TO THE	š. 6			
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	DRIVER'S SIGN	NATURE:		77 ;
☐ Above o	defects corrected	☐ Above defects need	not be corrected for safe opera	tion of vehicle
	MECHANIC'S SIGN	ATURE:		
	DRIVER'S SIGN	ATURE:	NATEC INC	



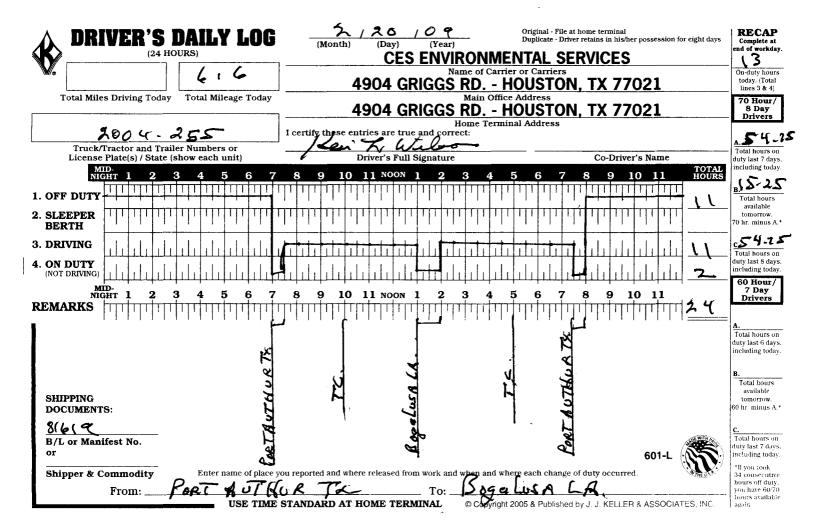
DATE: - 17	1.09	TRACTOR/TR	UCK NO.: _<&	٧	TR	AILER(S) NO.(S	): <u>264.</u>	
er av	HOB EPO CRX	mechanical bre	eakdown.	eficiencies in this	, eg h	-		peration or result in its
	Indica	te whether defect	s are on TRACTOF	R/TRUCK or TRA	LER - Use suf	ficient detail to lo	ocate for mechanic	<b>:.</b>
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			DRIVER'S SI	GNATURE:		2	. ,	
	☐ Above o	defects corrected		☐ Above defe	cts need not b	e corrected for s	safe operation of v	ehicle
			MECHANIC'S SIG	GNATURE:				
			DRIVER'S SI	GNATURE:	ED & ASSOCIATES II	NC.		



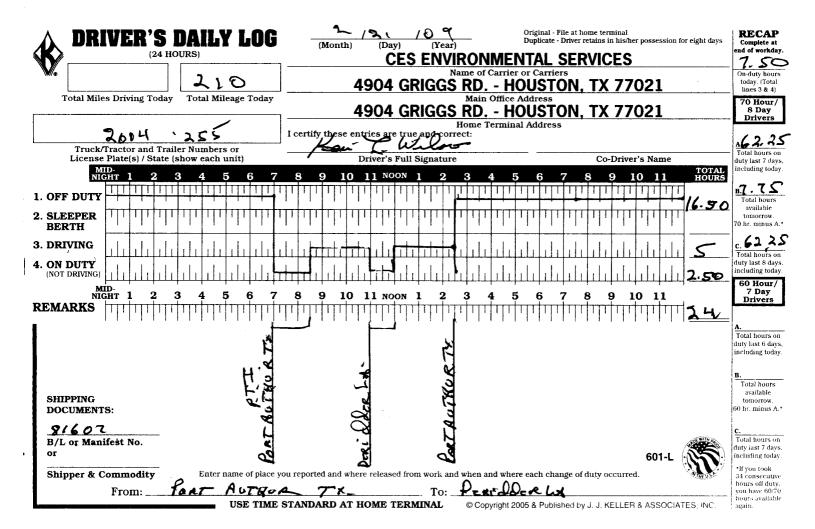
DATE: 2 - 18 - 0 9	_ TRACTOR/TRUCK NO.: 2	.004	TRAILER(S) NO.(S): 239	
APPROPRICK CHECK	I detect no defect or deficie mechanical breakdown.	ency in this motor vehicle as	would be likely to affect the safety of its opera	tion or result in its
K A T E	☐ I detect the following defect result in its mechanical brea	s or deficiencies in this moto kdown.	r vehicle as would be likely to affect the safety	of its operation of
Indi	cate whether defects are on TRA	ACTOR/TRUCK or TRAILER	- Use sufficient detail to locate for mechanic.	
	h. Artista	<i>a.</i> ,		
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		1		
	DRIVE	R'S SIGNATURE:		
☐ Above	e defects corrected	☐ Above defects n	eed not be corrected for safe operation of vehic	le
	MECHANIC	C'S SIGNATURE:		
	DRIVEF © Co	R'S SIGNATURE:	SSOCIATES, INC.	



DATE: ₹ · 1	TRACTOR/	TRUCK NO.: 2404	TRAILER(S) NO.(S):	
·	HOB mechanical	breakdown.	nicle as would be likely to affect the safety of its	
, Wise	I detect the result in its r	following defects or deficiencies in t nechanical breakdown.	his motor vehicle as would be likely to affect the s	afety of its operation of
	Indicate whether defe	ects are on TRACTOR/TRUCK or TI	RAILER - Use sufficient detail to locate for mechan	iic.
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w + 3	•	÷;	4	
		DRIVER'S SIGNATURE:	Mary Mary Mary Mary Mary Mary Mary Mary	
	☐ Above defects correcte	ed 🗆 Aboye d	defects need not be corrected for safe operation of	vehicle
		MECHANIC'S SIGNATURE:		
		DRIVER'S SIGNATURE:		



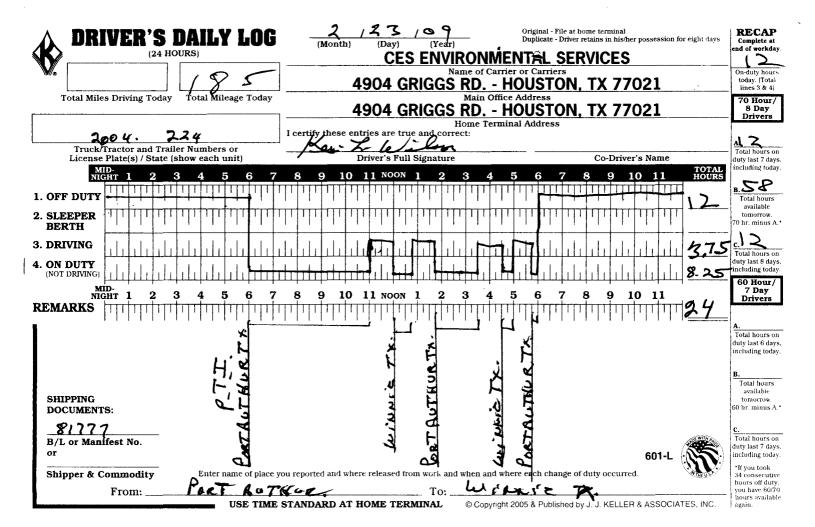
DATE:	TRAC	CTOR/TRUCK NO.:		TRAI	LER(S) NO.(S):	
 ~ 	HOB Mech	anical breakdown.	deficiencies in this	in the second		of its operation or result in its
	Indicate wheth	er defects are on TRACTO	DR/TRUCK or TRAI	LER - Use suffic	ient detail to locate for i	nechanic.
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					:	
	☐ Above defects of	orrected	☐ Above defe	ects need not be	corrected for safe opera	ation of vehicle
		MECHANIC'S S	SIGNATURE:			1914 V
		DRIVER'S S	GIGNATURE:		•	



DATE:	<u>ス・スト・の ぞ</u> TRACTOR/TR	UCK NO.: <u> </u>	TRAILER(S) NO.(S): _	777
	EPO CRX KI A ☐ I detect the fol	fect or deficiency in this motor vehicle eakdown. Howing defects or deficiencies in this in chanical breakdown.		
	Indicate whether defect	ts are on TRACTOR/TRUCK or TRAIL	<b>ER</b> - Use sufficient detail to locat	te for mechanic.
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		DRIVER'S SIGNATURE:		
	☐ Above defects corrected	□ Above defe	cts need not be corrected for safe	operation of vehicle
		MECHANIC'S SIGNATURE:	·	
		DRIVER'S SIGNATURE:		

<b>7</b>	HOURS)  Total Mileage Today	CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address  4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. Total lines 5 & 4)  70 Hour/8 Day Drivers
Truck/Tractor and T License Plate(s) / Sta		Home Terminal Address  I certify these entries are true and correct:  Driver's Full Signature  Co-Driver's Name	A6255 Total hours on duty last 7 days,
1. OFF DUTY 2. SLEEPER BERTH 3. DRIVING 4. ON DUTY (NOT DRIVING) MID-NIGHT 1 2 REMARKS	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 TOTA HOUSE  8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11  8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11  SEFAURY	
SHIPPING DOCUMENTS:  B/L or Manifest No. or  Shipper & Commodity  From:		ou reported and where released from work and when and where each change of duty occurred.  To:  STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	B. Total hours available tomorrow. 60 hr. minus A.*  C. Total hours on duty last 7 days. including today. *If you took 34 consecutive hours off duty. von have 60/70 hours available

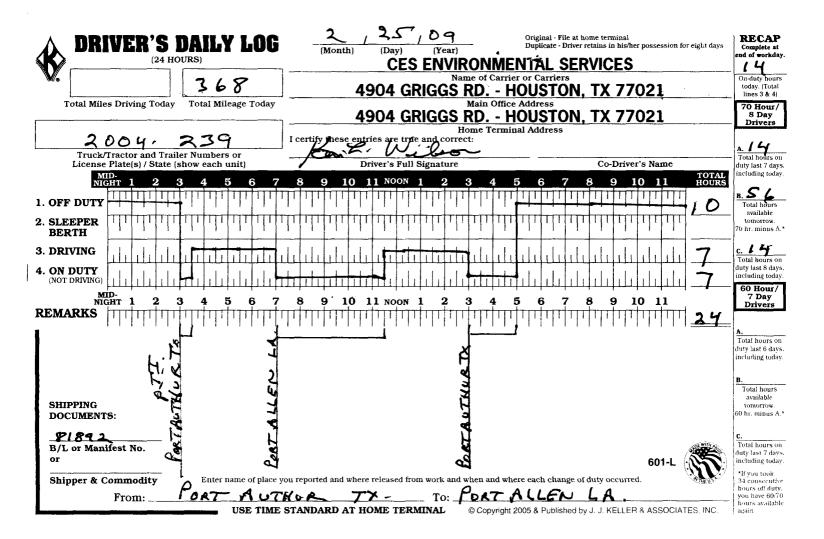
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):
	МВ mechanical breakdown.	ciency in this motor vehicle as would be likely to affect the safety of its operation or result in its
	C R X K A A I detect the following defe result in its mechanical browning	ects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or eakdown.
	Indicate whether defects are on TF	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
•		
	DRIV	'ER'S SIGNATURE:
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
	MECHAN	IIC'S SIGNATURE:
	DRIVE	ER'S SIGNATURE: Copyright 2003 & Published by J. J. KELLER & ASSOCIATES, INC.



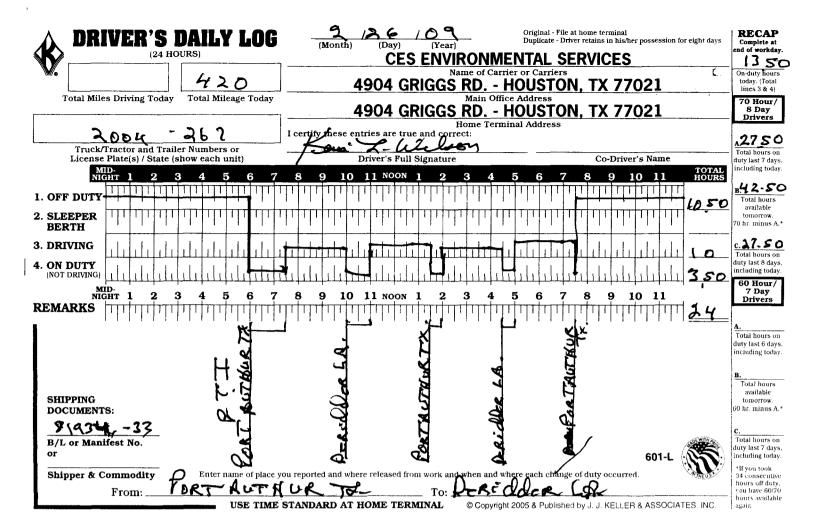
DATE:	くらうの TRACTOR/TRUC	ck no.:	TRAILER(S) NO.(S): _	224
	mechanical break	t or deficiency in this motor vehicle adown.  ving defects or deficiencies in this manical breakdown.	Tag e	n territoria de la composición de la composición de la composición de la composición de la composición de la c La composición de la composición de la composición de la composición de la composición de la composición de la
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	Indicate whether defects a	are on TRACTOR/TRUCK or TRAILE	R - Use sufficient detail to locate	e for mechanic.
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		DRIVER'S SIGNATURE:		
	☐ Above defects corrected	☐ Above defects	s need not be corrected for safe	operation of vehicle
	N	MECHANIC'S SIGNATURE:		
		DRIVER'S SIGNATURE:		× - ' ,

DRIVER'S DAILY LO	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
<b>W</b> .	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Toda	4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day — Drivers
Truck/Tractor and Trailer Numbers or	Home Terminal Address I certify these entries are true and correct:	Α.
License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	Total hours on duty last 7 days, including today.
1. OFF DUTY 2. SLEEPER BERTH	7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS  24	B. Total hours available tomorrow. 70 hr. minus A.*
3. DRIVING 4. ON DUTY (NOT DRIVING)		C. Total hours on duty last 8 days, including today.  60 Hour/
REMARKS	7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers  A. Total hours on
	OFFOLTY	duty last 6 days, including today.
SHIPPING DOCUMENTS:	·	B. Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No.	601-L	C. Total hours on duty last 7 days, including today. *If you took
From:	To:  ### STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	34 consecutive hours off duty, you have 60/70 hours available again.

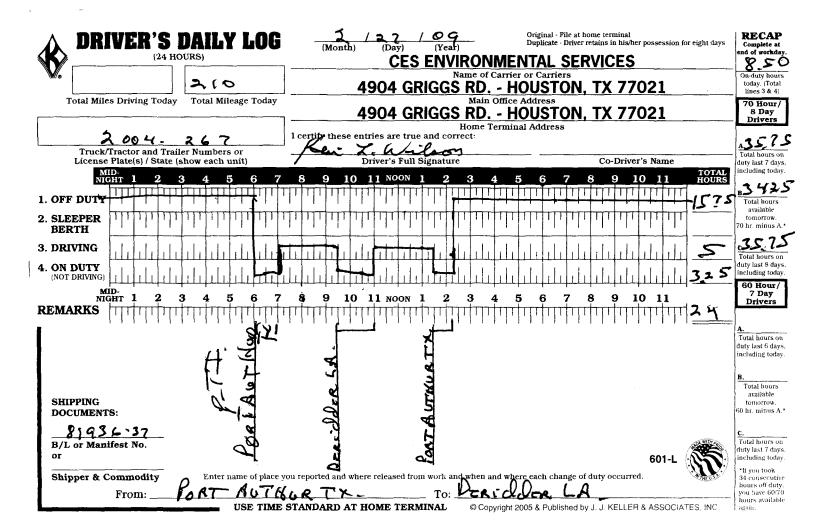
DATE:	TRACTOR/TRUCK NO.:	TRAILER(S) NO.(S):					
	I detect no defect or defice to the first section of the first section o	ciency in this motor vehicle as would be likely to affect the safety of its operation or result in its					
	v I	ects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or eakdown.					
	Indicate whether defects are on TF	RACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.					
	DRIVER'S SIGNATURE:						
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle					
	MECHAN	IIC'S SIGNATURE:					
	DRIVE	ER'S SIGNATURE:					



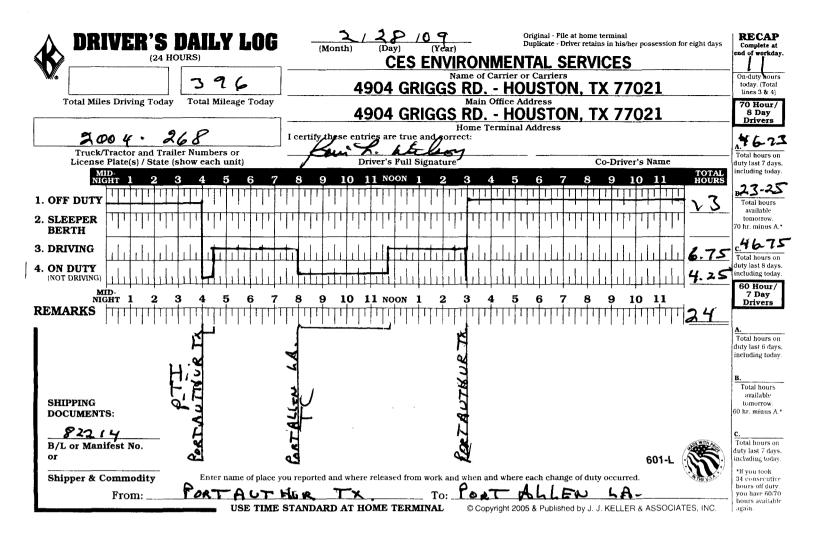
DATE: 2	7509 TRACTOR/TRUC	к no.: <u>200</u>	4	TRAILER(S) NO.(S):	259	
17.1	mechanical break	down. ring defects or defici			safety of its operation or result	
	Indicate whether defects a		RUCK or TRAILER - U	se sufficient detail to locat	e for mechanic.	
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,		† <b>•</b>	- 1e - 1e - 1e - 1e - 1e - 1e - 1e - 1e	X		
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		· .			***************************************	
		DRIVER'S SIGNA	ATURE:			
	☐ Above defects corrected		☐ Above defects need	not be corrected for safe	operation of vehicle	
	N	IECHANIC'S SIGNA	TURE:			
		DRIVER'S SIGNA © Copyright 2003 & F			· · · · · · · · · · · · · · · · · · ·	



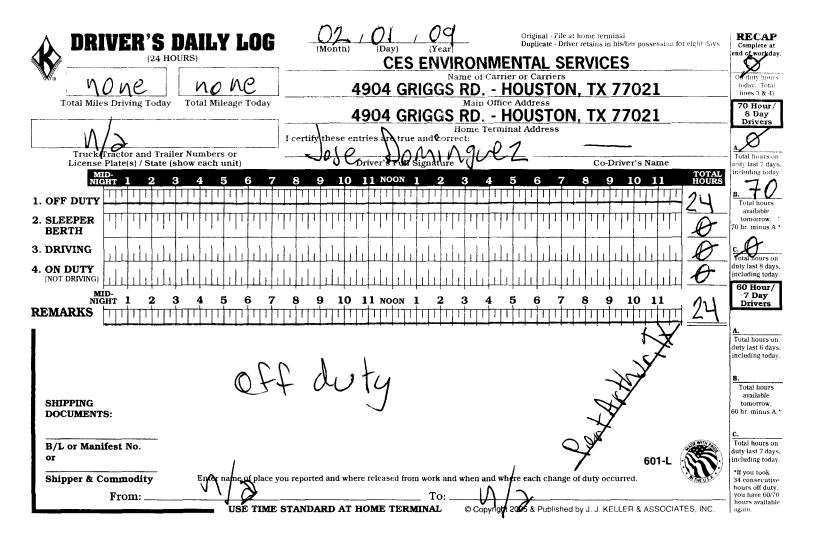
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	K Å T E	I detect the follow result in its mecha	nical breakdow	n.			<b>.</b>	et the safety of its operated in the	ation o
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	☐ Above	defects corrected	DRIVER'S S	IGNATURE:	defects need not b	e correct	ed főr safe opera	tion of vehicle	¥1.
		<b>M</b>	ECHANIC'S SI	GNATURE:	KELLER & ASSOCIATES IN	*	aet Televisia (n. 1997)		

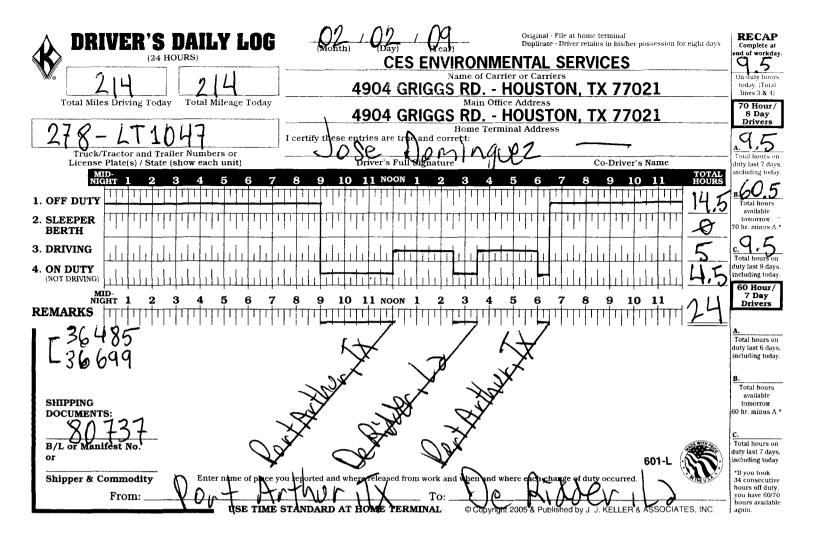


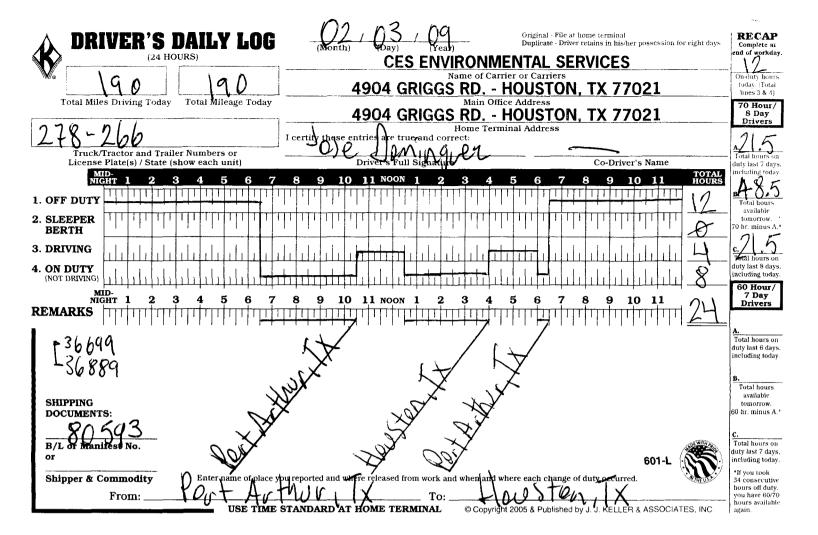
DATE -212	TRACTOR/TRUCK NO.:	2001	TRAILER(S) NO.(S):	
C H E	detect no defect or defice mechanical breakdown.	ciency in this motor vehicle as wo	ould be likely to affect the safety of its	operation or result in its
C K	I detect the following defe result in its mechanical br	ects or deficiencies in this motor vreakdown.	vehicle as would be likely to affect the	safety of its operation or
	Indicate whether defects are on Ti	RACTOR/TRUCK or TRAILER - U	Use sufficient detail to locate for mecha	anic.
		\$ ***	<del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del> - <del>-</del>	
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			<u> </u>	
	DRIN	VER'S SIGNATURE:	'4	
	Above defects corrected	☐ Above defects nee	ed not be corrected for safe operation of	of vehicle
	MECHAN	NIC'S SIGNATURE:		
	DRIV	/ER'S SIGNATURE: © Copyright 2003 & Published by J. J. KELLER & ASSC	OCIATES, INC.	

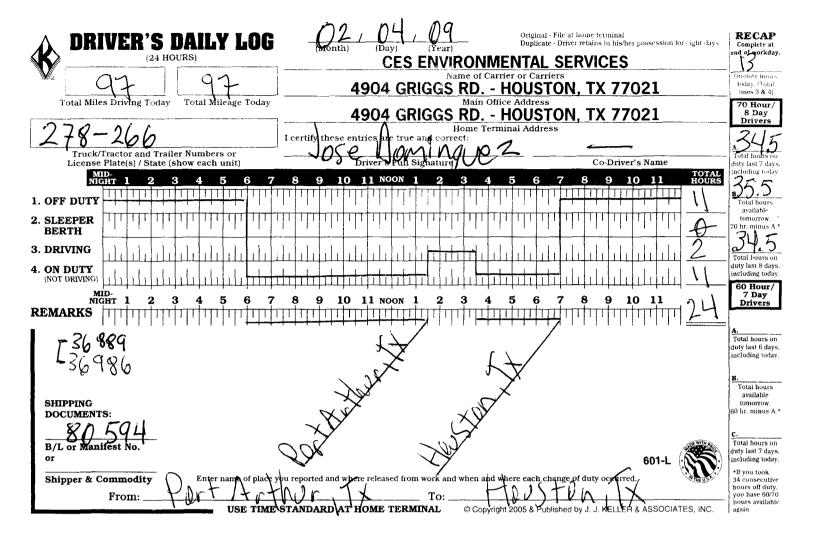


HE C	mechanical breakdown.	ficiency in this motor vehic	sle as would be likely to a	NO.(s): 26 V	
Ť E	result in its mechanical t	oreakdown.		oe likely to affect the safety	of its operation o
<u> </u>		: •	, d·		
		-		15 July 10	
				* :	
	DR	IVER'S SIGNATURE:			
☐ Above o	defects corrected	☐ Above def	ects need not be correcte	d for safe operation of vehic	cle
	MECHA	NIC'S SIGNATURE:			
	DRI	VER'S SIGNATURE: © Copyright 2003 & Published by J. J. KEI	LER & ASSOCIATES, INC.		

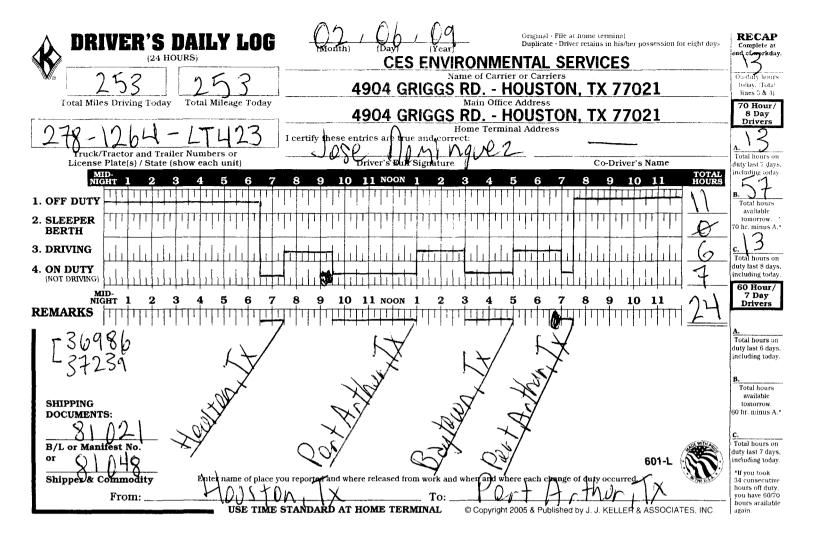


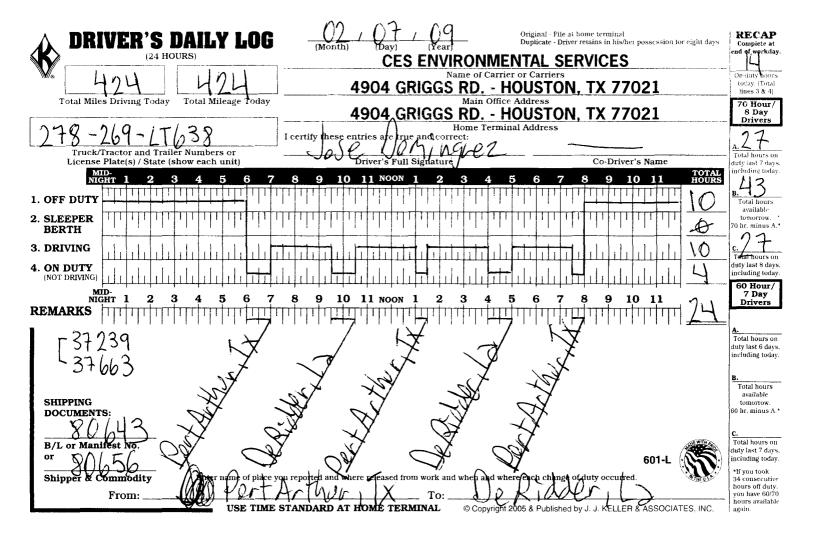




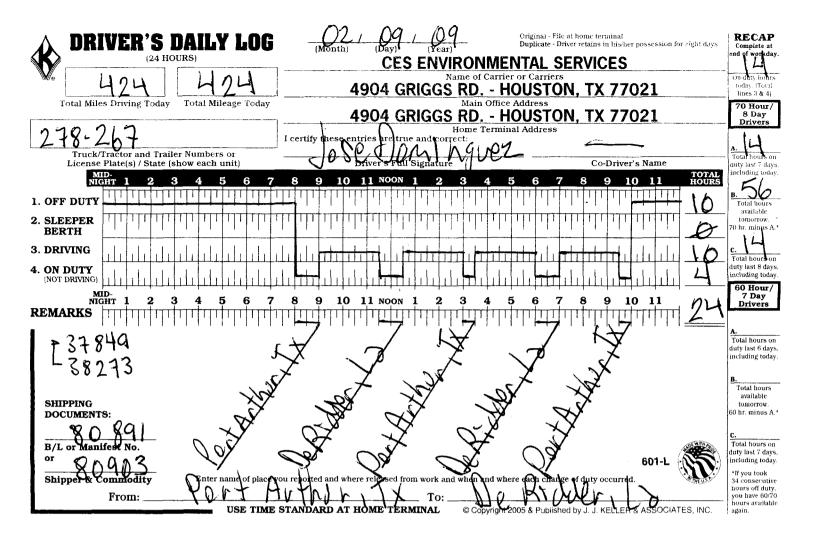


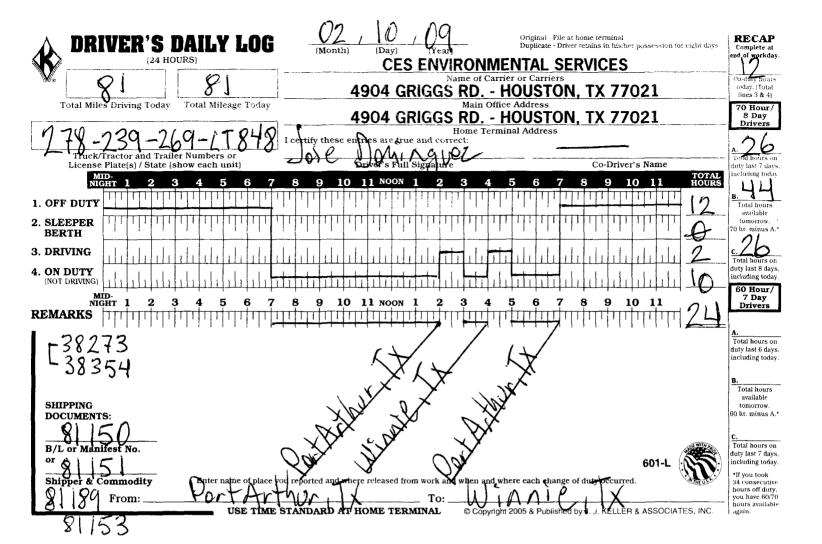
DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers	RECAP Complete at end Nworkday.
none none	4904 GRIGGS RD HOUSTON, TX 77021	fi-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today	4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
N/>	Home Terminal Address I certify these entries are true and correct:	B
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Yull Signature Co-Driver's Name	Total bours on duty last 7 days.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 TOTAL HOURS	including today.
1. OFF DUTY	<del>!` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` </del> '\	Total flours
2. SLEEPER BERTH		tomorrow. 70 hr. minus A.*
3. DRIVING	$\alpha$	c. Total hours on
4. ON DUTY (NOT DRIVING)		duty last 8 days, including today.
MID- NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 24	60 Hour/ 7 Day Drivers
		Total hours on duty last 6 days.
į	$\Lambda$ $\Gamma$ $\Gamma$ $\Lambda$ $\Gamma$ $\Gamma$ $\Gamma$	including today.
1	Q++ 0079	Total hours
SHIPPING DOCUMENTS:	$\mathcal{J}$	tomorrow. 60 hr. minus A.*
B/L or Manifest No.	601-L (-	C. Total hours on duty last 7 days, including today.
Shipper & Commodity Enter with of place yo	ou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty.
From: USE TIME S	TO:  STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available again.





DRIVER'S DAILY LOG	(Month) / OS / OG CES ENVIRON	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days	RECAP Complete at end of workday.
hone none	4904 GRIGGS RD	Carrier or Carriers HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today	4904 GRIGGS RD	n Office Address HOUSTON, TX 77021 Terminal Address	70 Hour/ 8 Day Drivers
Truck/T/actor and Trailer Numbers or License Plate(s) / State (show each unit)	certify these entries and true and correct:	Co-Driver's Name	A Total hours on duty last 7 days.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 TOTAL HOURS	including today.
1. OFF DUTY		24	Total hours available
2. SLEEPER BERTH		111111111111111111111111111111111111111	tomorrow. 70 hr. minus A.*
3. DRIVING			Total hours on duty last 8 days.
4. ON DUTY (NOT DRIVING) MID-			including today.
	8 9 10 11 NOON 1 2 3		7 Day Drivers
1			A. Total hours on
	00 1 1		duty last 6 days. including today.
	iff duty		B. Total hours available
SHIPPING DOCUMENTS:			tomorrow. 60 hr. minus A.*
B/L or Manifest No.		601-L	C. Total hours on duty last 7 days, including today.
	reported and where released from work and when a	and where each change of duty occurred.	*If you took 34 consecutive hours off duty.
From: USE TIME ST	To: ANDARD AT HOME TERMINAL © Co	pyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available again.





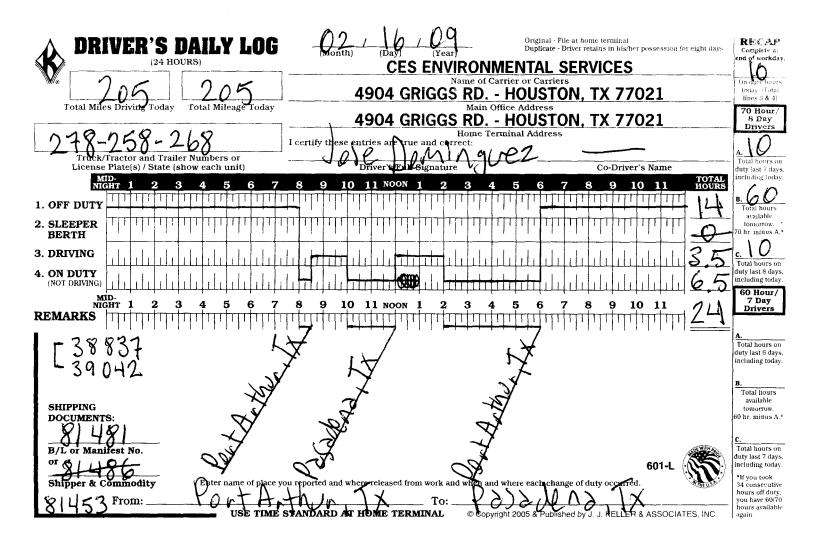
DRIVER'S DAILY LOG	(Month) (Day) (Year) Duplicate  CES ENVIRONMENTAL		aربطو بيطو آ
Total Miles Driving Today Total Mileage Today	4904 GRIGGS RD HOUST  Main Office Address	ON, TX 77021 teday. Total lines 3 & 4]	ul 1) r/
	4904 GRIGGS RD HOUST  Home Terminal Address  I certify these entries are true and correct:		
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)  MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6	Co-Driver's Name  TOTAL TOTAL HOURS  7 8 9 10 11 HOURS	
1. OFF DUTY		Total hours available	
2. SLEEPER BERTH		tomorrow. 70 hr. minus A	. •
3. DRIVING 4. ON DUTY (NOT DRIVING)	<del>╷</del> ┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇	C. 34 Lord Rours of duty last 8 day including toda including toda	ays.
MID- NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6	7 8 9 10 11 60 Hour, 7 Day Drivers	
[38407 3865]		A. Total hours o duty last 6 day including toda	ays,
SHIPPING DOCUMENTS:  B/L or Mannest No.		B. Total hours available tomorrow. 60 hr. minus 4	r. i A.*
Shipper a Commodity From:	u reported and where released from was and whith and where such characteristics are the such characteristics.  Tandardat Home Terminal © Copyright 2015 Pub	601-L duty last 7 day including toda	ays, day, tive uty, 0/70

DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP Complete at end a workday.
Total Miles Driving Today Total Mileage Today	4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address	On-dery hours fields: Fotal lines 5 & 4] 70 Hour/
	4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address	8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Stenature Co-Driver's Name	A Total hours on
MIGHT 1 2 3 4 5 6 7	Driver's Full Signature Co-Driver's Name  8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	duty last 7 days, including today.
1. OFF DUTY	24	B. Total hours available
2. SLEEPER BERTH		tomorrow. 70 hr. minus A.*
3. DRIVING		Total hours on duty last 8 days,
4. ON DUTY (NOT DRIVING)	<u> </u>	including today.
NIGHT 1 2 3 4 5 6 7 REMARKS 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 24	7 Day Drivers
	OFF duty	Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No. or	601-L	C. Total hours on duty last 7 days, including today.
1/1/-	ou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty.
From: V V V	To: V / STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available again.

DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP* Complete at end workday.
Total Miles Driving Today  Total Miles Driving Today	4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address	On-outy liners foday. (Total lines 3 & 4)  70 Hour/
Truck/Tractor and Trailer Numbers or	4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address  I certify these entries are true and correct:	S Day Drivers
License Plate(s) / State (show each unit)  MID- NIGHT 1 2 3 4 5 6 7	Driver's Mail Signature Co-Driver's Name  8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	Total hours on duty last 7 days. including today.
1. OFF DUTY 2. SLEEPER BERTH		Total hours available tomorrow. 70 hr. minus A.
3. DRIVING 4. ON DUTY	4	C: Total hours on duty last 8 days, including today.
(NOT DRIVING)	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 	60 Hour/ 7 Day Drivers
	afe dutu	A. Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		B. Total hours available tomorrow.
B/L or Manifest No.	601-L	C. Total hours on duty last 7 days. including today.
From:	To:  STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	*if you took 34 consecutive hours off duty, you have 60/70 hours available again.

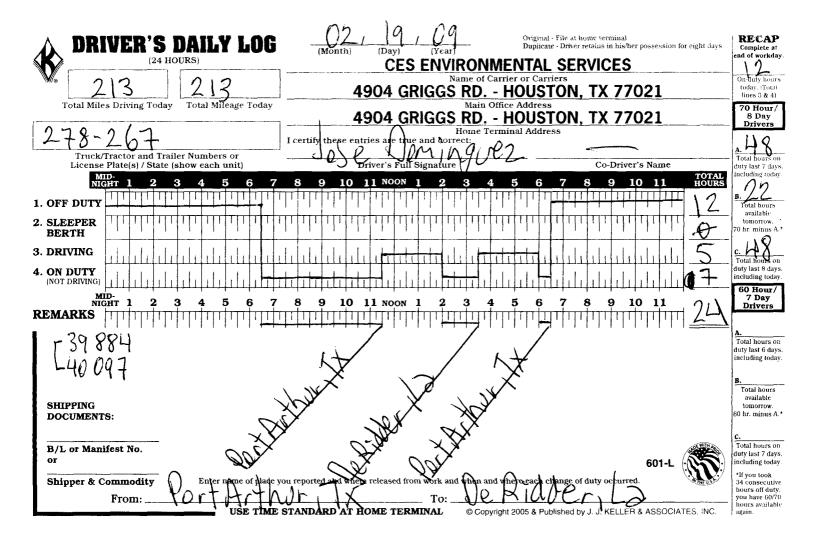
DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days	RECAS ² Complete at end of workday.
(24 HOURS)	CES ENVIRONMENTAL SERVICES	4
NONE NONE	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-laty hours today Total
Total Miles Driving Today Total Mileage Today	Main Office Address	lines (% & 4)   70 Hour/
	4904 GRIGGS RD HOUSTON, TX 77021	8 Day Drivers
N/	Home Terminal Address  I certify these entries are true and correct:	<b>A</b>
Truck/Tractor and Trailer Numbers or	10(0 110M 10A NO)	A. Total hours on
License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	duty last 7 days.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 TOTAL HOURS	70
1. OFF DUTY		B. Total hours
2. SLEEPER BERTH		available tomorrow. 70 hr. minus A.*
3. DRIVING	11 11 11 11 11 11 11 A	c. Total hours on
4. ON DUTY (NOT DRIVING)	A	duty last 8 days, including today.
MID- 1 0 0 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day
NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Drivers
	QFF duty	Total hours on duty last 6 days, including today.
1		В.
SHIPPING DOCUMENTS:		Total hours available tomorrow. 60 hr. minus A.*
l		<u>c.</u>
B/L or Manifest No. or	601-L	Total hours on duty last 7 days, including today.
Shipper & Commodity Enter name of place y	ou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive
From: \lambda / \sigma	To:	hours off duty,
	STANDARD AT HOME TERMINAL © Copyright 2009 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available

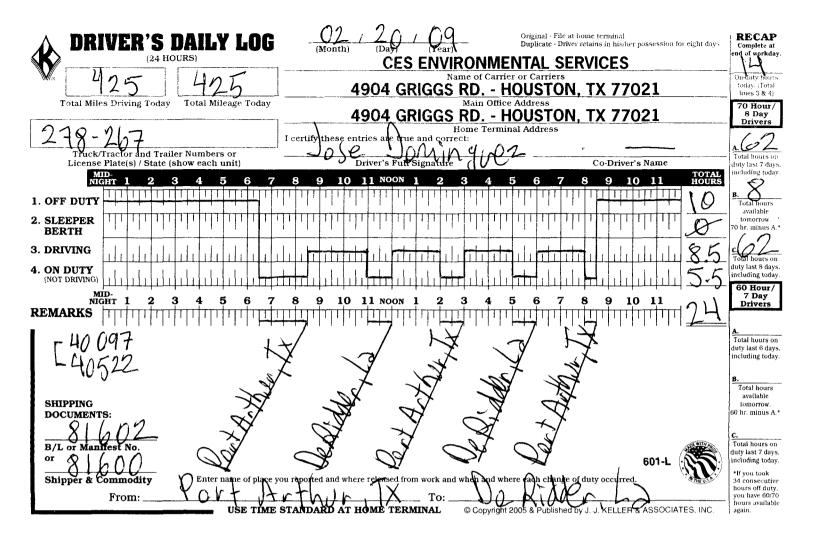
DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/ner possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
Total Miles Driving Today  Total Miles Driving Today  Total Mileage Today	Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address	On-duty hours today (Total lines 3 & 4)
	4904 GRIGGS RD HOUSTON, TX 77021	8 Day Drivers
N/	Home Terminal Address I certify these entries are true and correct:	0
Truck/Tractor and Grailer Numbers or License Plate(s) / State (show each unit)	Loo Co-Driver's Name	Total hours on
MID-NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	duty last 7 days. including today.
1. OFF DUTY		B. + O  Total hours available
2. SLEEPER BERTH		tomorrow. 70 hr. minus A.*
3. DRIVING		C. Total hours on duty last 8 days.
4. ON DUTY (NOT DRIVING)	<u> </u>	including today.
MID- NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
	OFF duty	Total hours on duty last 6 days, including today.
]		B. Total hours
SHIPPING DOCUMENTS:		available tomorrow. 60 hr. minus A.*
B/L or Manifest No. or	601-L	C. Total hours on duty last 7 days. including today.
Shipper & Commodity Enter name of place w	ou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty,
From:	TO:  STANDARD AT HOME TERMINAL.  © Conviols 2005 & Publish by L. I. KELLER & ASSOCIATES INC.	you have 60/70 hours available

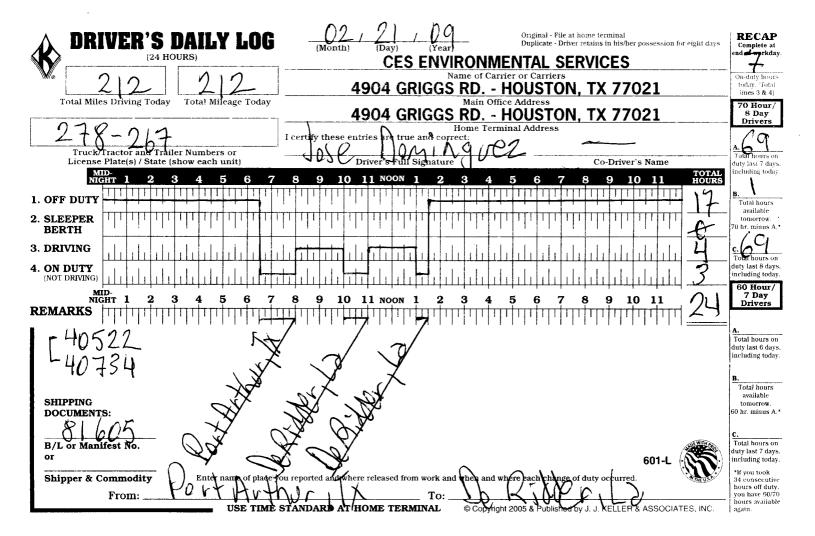


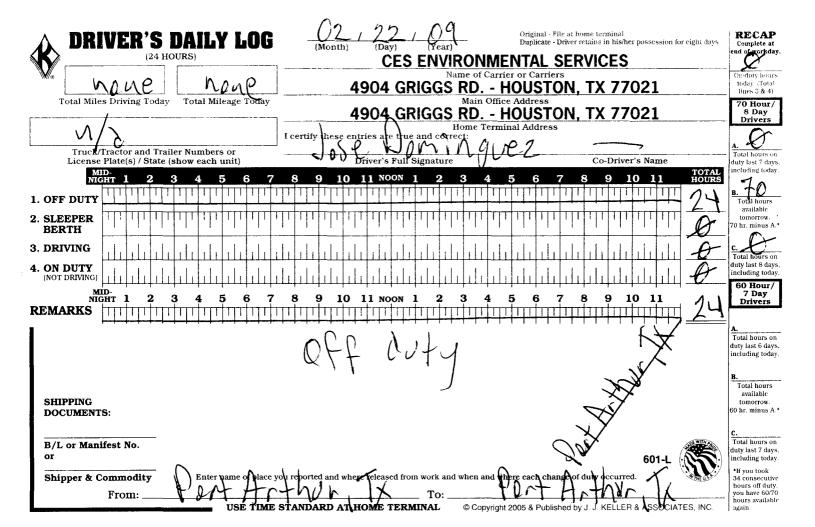
∧ DRIVER'S DAILY LOG	$O_{\text{(Nonth)}}$ / $O_{\text{(Day)}}$ / $O_{\text{(ear)}}$	Original - File at home terminal  Duplicate - Driver retains in his/her possession for eight days	RECAP Complete at
(24 HOURS)		ENTAL SERVICES	end of workday.
232 232	Name of Ca	rrier or Carriers HOUSTON, TX 77021	On-d-sty hos, so today, (fotal lines 3 & 4)
Total Miles Driving Today Total Mileage Today		HOUSTON, TX 77021	70 Hour/ 8 Day
710 420-250		minal Address	Drivers
Truck/Tractor and Trailer Numbers or	certify these entries are true and correct:		A. ZZ
License Plate(s) / State (show each unit)	Driver's Full Signature	Co-Driver's Name	- Total hours on duty last 7 days. including today.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11 TOTAL HOURS	48
1. OFF DUTY		111111111111111111111111111111111111111	B. O
2. SLEEPER BERTH			available tomorrow. 70 hr. minus A.*
3. DRIVING		<del>                                      </del>	c. 22 Total hours on
4. ON DUTY (NOT DRIVING)			duty last 8 days, including today.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11	7 Day Drivers
REMARKS	<del>╏</del> ┪┪		
T39042 NY	MY / MY /	<b>、</b> /	Total hours on duty last 6 days.
1-39274 Z1X	FIX FIXT	<b>▼</b>	including today.
31211	为什么为什	<i>F</i>	B. Total hours
SHIPPING	其一个 我可了		available tomorrow.
DOCUMENTS:	EE B GE		60 hr. minus A.*
1 31 4 H	3 7 3 9		C. Total hours on
B/L or Manifest No.	2 C 27	6011	duty last 7 days.
Shipper & Commedity Figure vame of place you	reported and where released from work and when and	601-L	*If you took
Shipper'& Commodity Enter name of place you	X To:	TIME TO THE THE STATE OF THE ST	34 consecutive hours off duty, you have 60/70
	TANDARD AT HOME TERMINAL © Copyri	ght 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available again.

DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/ner possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
Total Miles Driving Today  Total Miles Driving Today  Total Milesge Today	Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address	On-dury hours today. :Total lines 3 & 4]
278-1264-267	4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address  I certify these entries are true and correct:	70 Hour/ 8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)  MID- NIGHT 1 2 3 4 5 6 7	Co-Driver's Name  8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	Total hours on duty last 7 days, including today.
1. OFF DUTY 2. SLEEPER		B. Total hours available tomorrow.
BERTH 3. DRIVING	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	70 hr. minus A.*
4. ON DUTY (NOT DRIVING) MID-	14	duty last 8 days, including today.
REMARKS THE THE PART OF THE PA	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 Day Drivers
[39460]		Total hours on duty last 6 days, including today.
SHIPPING		Total hours available tomorrow.
DOCUMENTS:		60 hr. minus A.*  C.  Total hours on
B/L or Manifest No. or Shipper & Commodity  Enter name of place ye	ou reported and where released from work and where and where each change of duty occurred.	duty last 7 days, including today. *If you took
From: Port Arth	To:  Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	34 consecutive hours off duty, you have 60/70 hours available again.

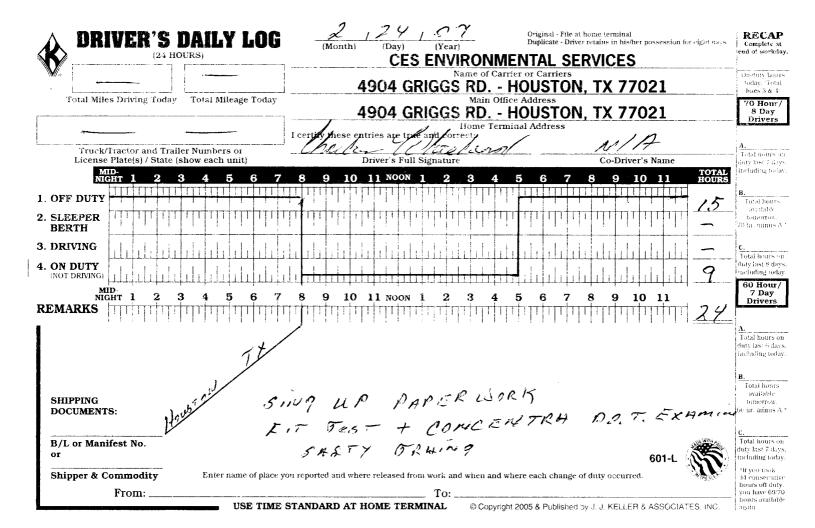




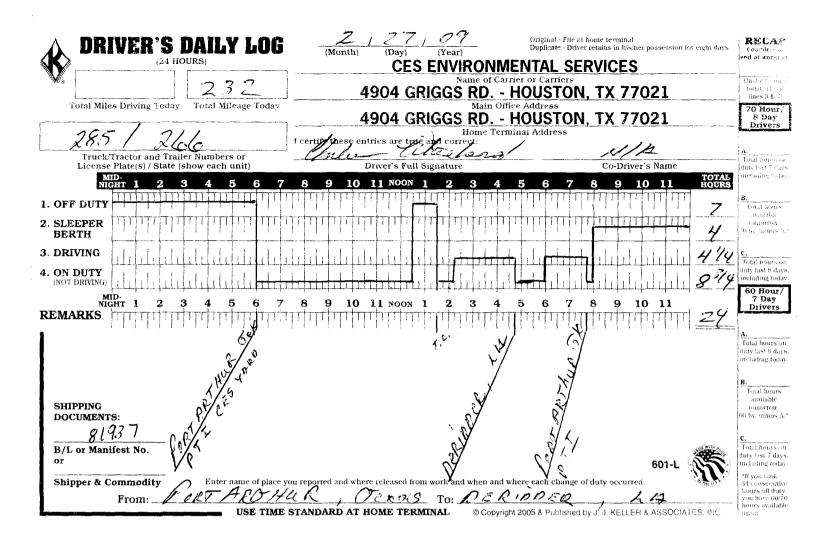




DRIVER'S DAILY LOG	2 / 16 / 2 Original - File at home terminal Duplicate - Driver retains in his/her possession to reight days  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
<b>W</b> //2	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today	Main Office Address 4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day
	Home Terminal Address  I certif these entries are true and correct:	Drivers
Truck/Tractor and Trailer Numbers or	Winden Willicheas W/A	A. Total hours on
License Plate(s) / State (show each unit)  MID-  NIGHT 1 2 3 4 5 6 7	Driver's Full Signature Co-Driver's Name  8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	duty last 7 days, including today
1. OFF DUTY		B. Total hours
2. SLEEPER BERTH	┍╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫╫	avai!able tomerrow. 70 hr minus A.1
3. DRIVING		C. Total hours on
4. ON DUTY		duty jast 8 days. including today.
MID. NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
0	88 DUTY 24 48	Total hours on duty last 6 days, including today.
0	SE DILTY ZY HB ORT ARTHUR TX	B.
SHIPPING DOCUMENTS:	- 16-99 TAR 2-23-09	Total hours available tomorrow 60 hr. minus A.*
B/L or Manifest No.	601-L	C. Total hours on outy last 7 days, including today.
	you reported and where released from work and when and where each change of duty occurred.	*if you took 34 consecutive hours off duty.
From: USE TIME	To: STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC	you have 60/70 hours available again.



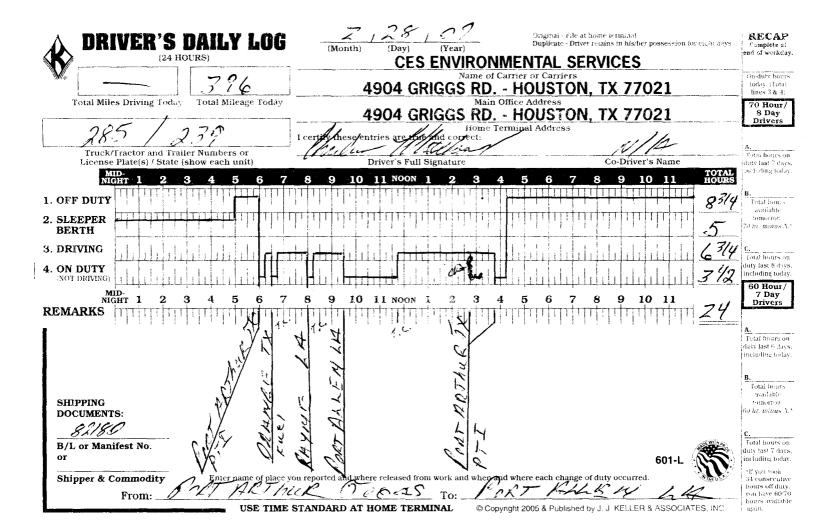
DRIVER'S DAILY LOG	Z   Z 5   C 7   Original - File at home terminal   Duplicate - Driver retains in his/her possession for eight days   CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
Total Miles Driving Today Total Mileage Today	Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address	On-duty hours today: 'Total lines 3 & 4;
Fold Miles Diving 1 state of Total Miles Folds	4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	I certif these entries are fine fid correct:    Surviva   Co-Driver's Name   Co-Driver's	A. Total hours on duty tast 7 days, including today
1. OFF DUTY	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 TOTAL HOURS	B. Total hours available
2. SLEEPER BERTH 3. DRIVING		tomorrow. 70 hr. minus A.*  C.  Total hours on
4. ON DUTY (NOT DRIVING) MID-NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	duty last 8 days, including today. 60 Hour/ 7 Day Drivers
REMARKS		A. Total hours on
	OSS DOLTY ZHAR	duty last 6 days, uncluding today.
SHIPPING DOCUMENTS:	2-25-07 The	Total hours available tomorrow. 60 he minus A.*
B/L or Manifest No. or	2-26-27 601-L	C. Total hours on duty last 7 days, including today.
From:	To:  STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES. INC	34 consecutive hours off duty, you have 60/70 hours available again.



## **DRIVER'S VEHICLE INSPECTION REPORT**

AS REQUIRED BY THE D.O.T. FEDERAL MOTOR CARRIER SAFETY REGULATIONS, I SUBMIT THE FOLLOWING:

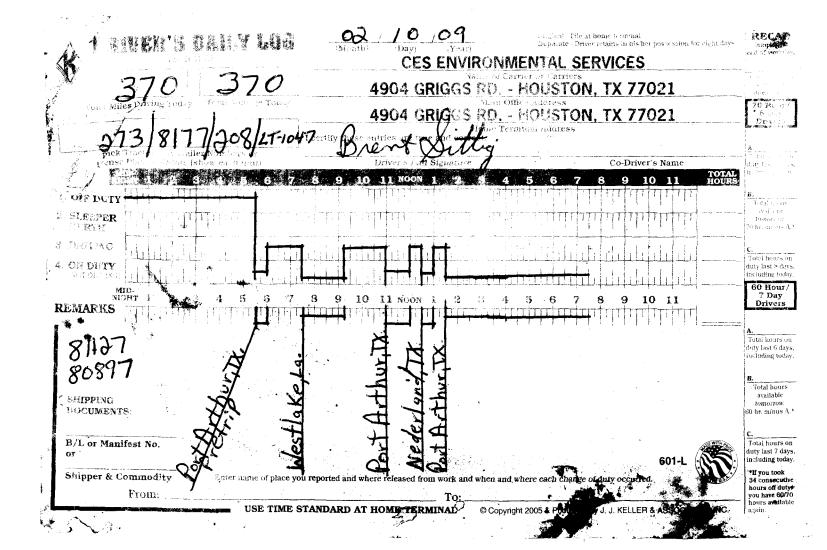
DATE:	TRACTOR/TRUCK	TRAILER(S) NO.(S): 368
	P I detect no defect of mechanical breakdors	or deficiency in this motor vehicle as would be likely to affect the safety of its operation or result in its own.
	I detect the following result in its mechan	ng defects or deficiencies in this motor vehicle as would be likely to affect the safety of its operation or nical breakdown.
	Indicate whether defects are	e on TRACTOR/TRUCK or TRAILER - Use sufficient detail to locate for mechanic.
		DRIVER'S SIGNATURE: ////////
	☐ Above defects corrected	☐ Above defects need not be corrected for safe operation of vehicle
	ME	ECHANIC'S SIGNATURE:
	•	DRIVER'S SIGNATURE:

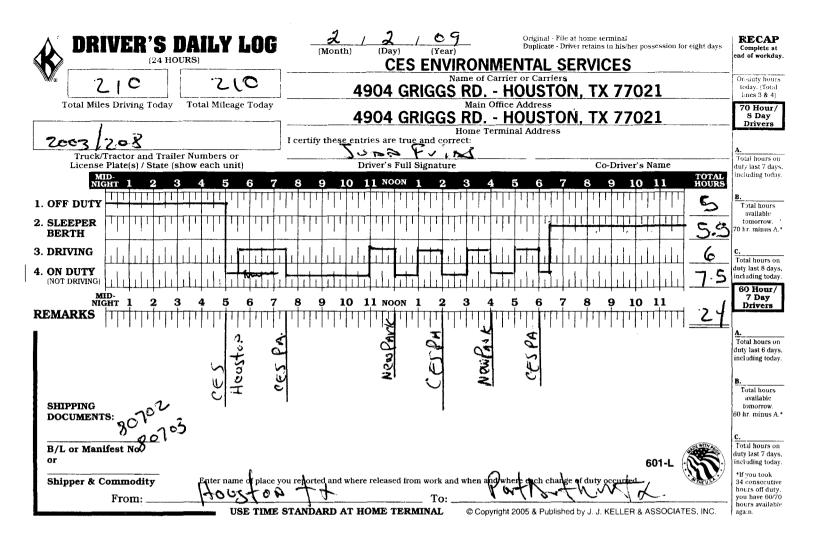


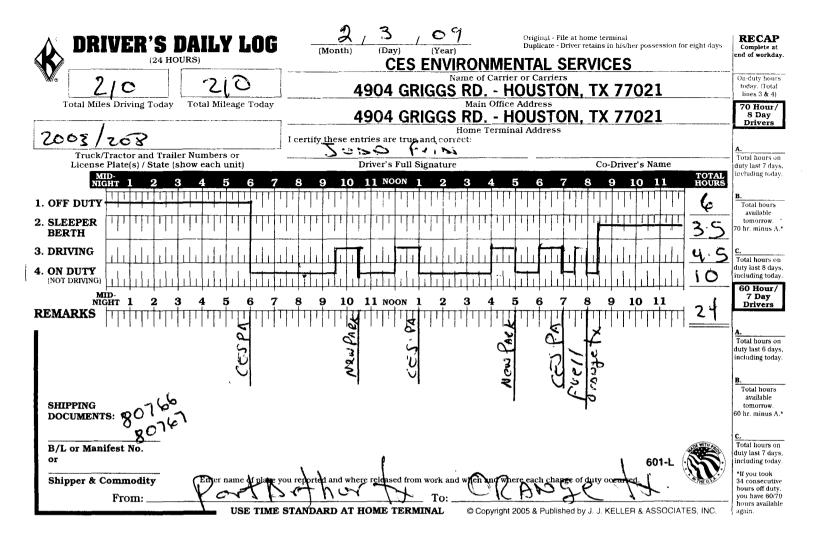
## **DRIVER'S VEHICLE INSPECTION REPORT**

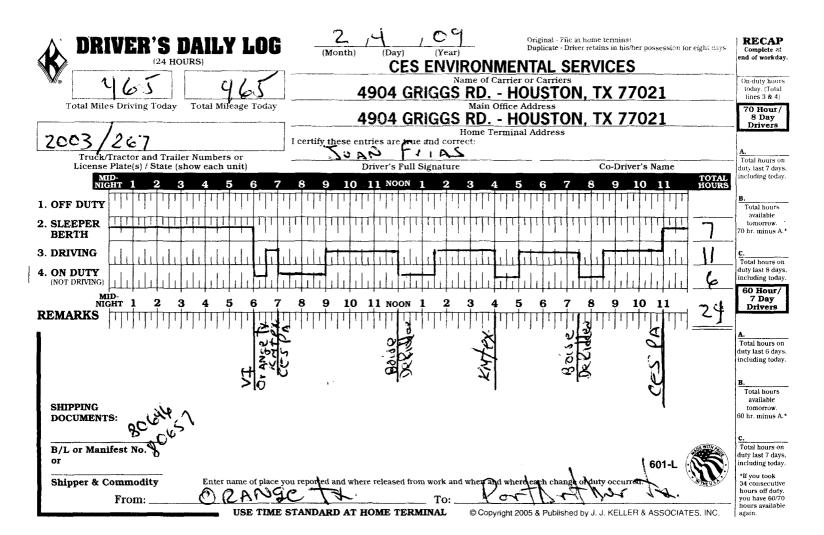
AS REQUIRED BY THE D.O.T. FEDERAL MOTOR CARRIER SAFETY REGULATIONS, I SUBMIT THE FOLLOWING:

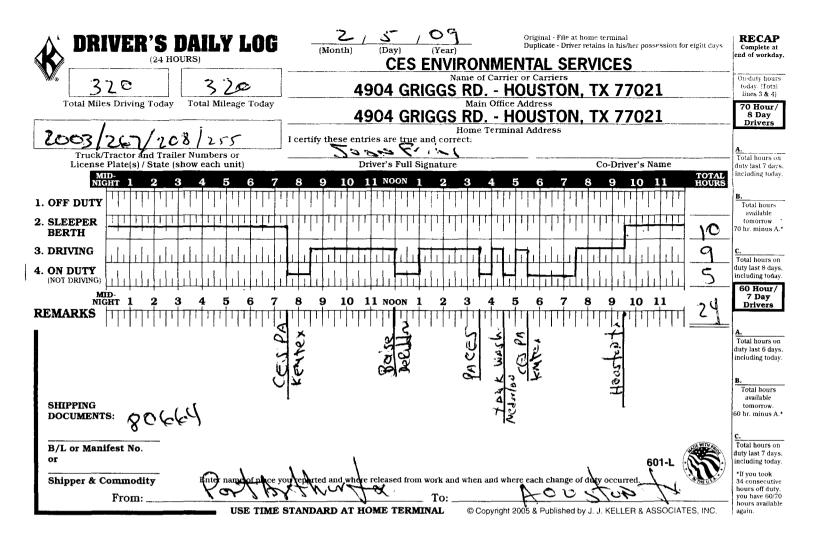
DATE 2 28 - 09	TRACTOR/TRUCK NO.: 255	TRAILER(S) NO.(S):
APPROPR GHECV	detect no defect or deficiency in this mo mechanical breakdown.	tor vehicle as would be likely to affect the safety of its operation or result in its
	☐ I detect the following defects or deficiencients result in its mechanical breakdown.	es in this motor vehicle as would be likely to affect the safety of its operation or
Indicat	e whether defects are on TRACTOR/TRUCK	C or TRAILER - Use sufficient detail to locate for mechanic.
		11 11/1
	DRIVER'S SIGNATUI	RE: / Mothers
☐ Above d	efects corrected	bove defects need not be corrected for safe operation of vehicle
	MECHANIC'S SIGNATUF	E:
	DRIVER'S SIGNATUF © Copyright 2003 & Publishe	IE:

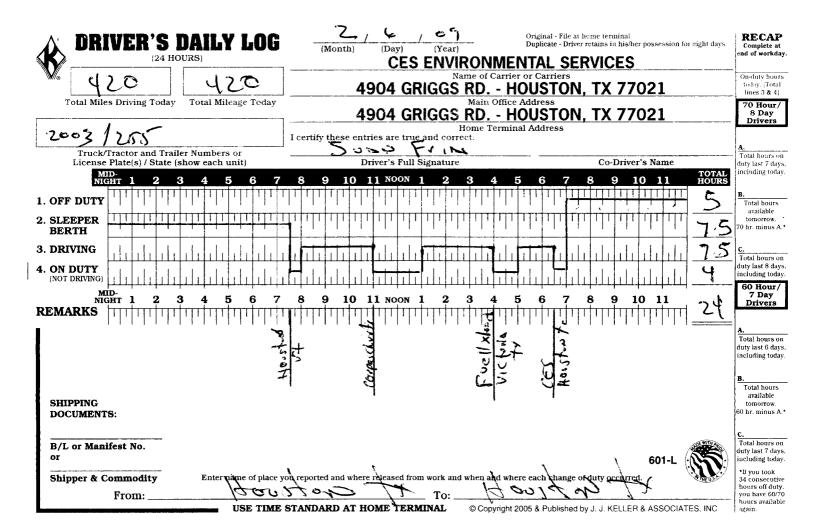


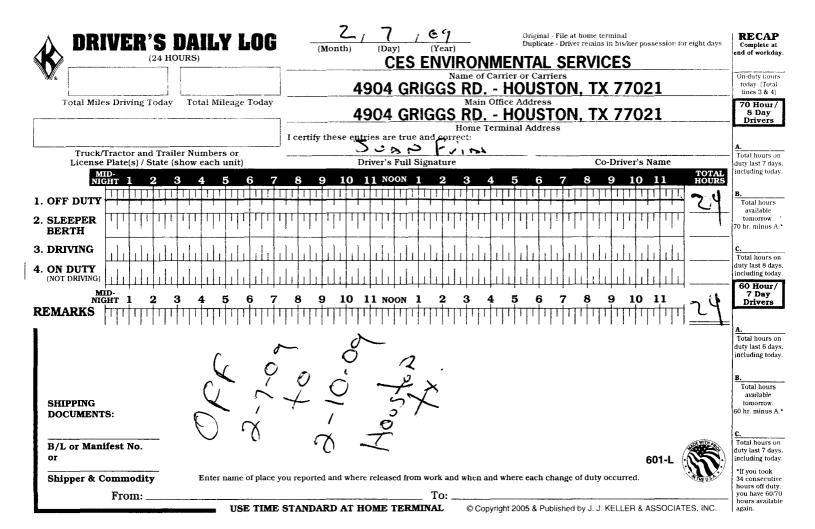


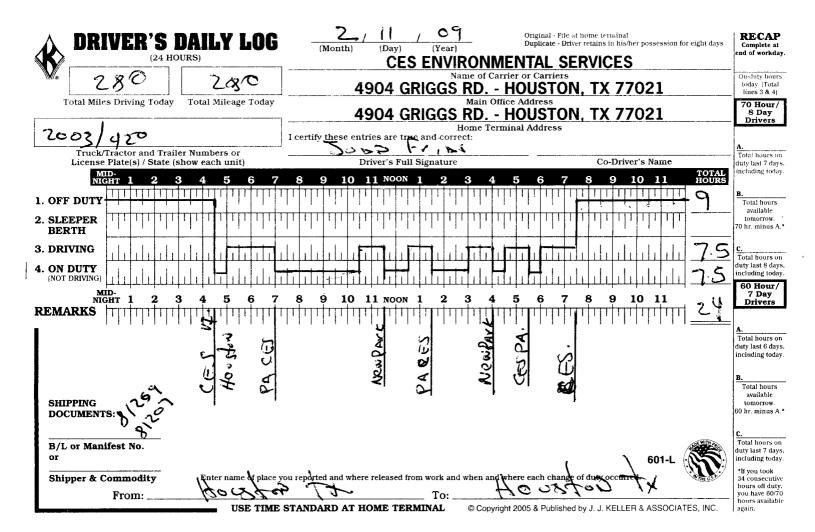


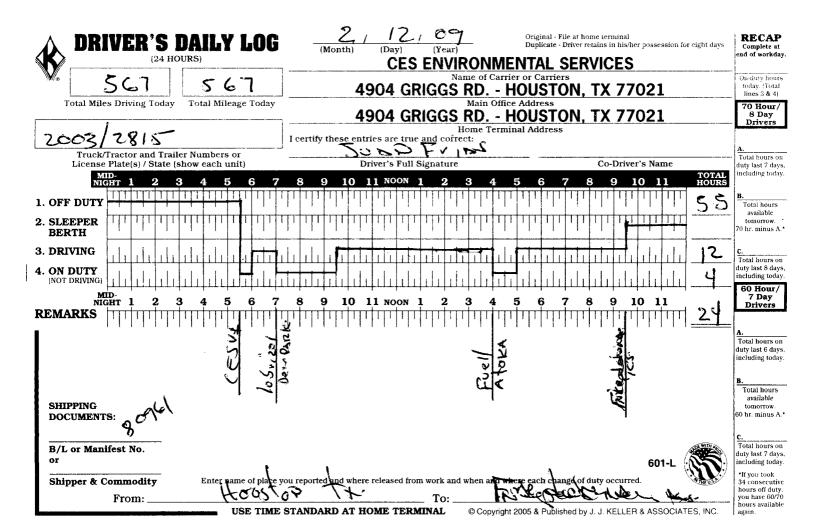


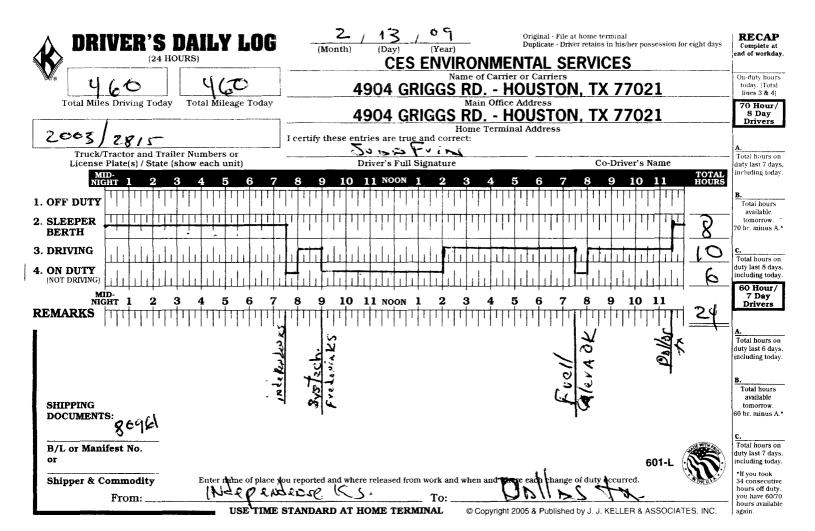


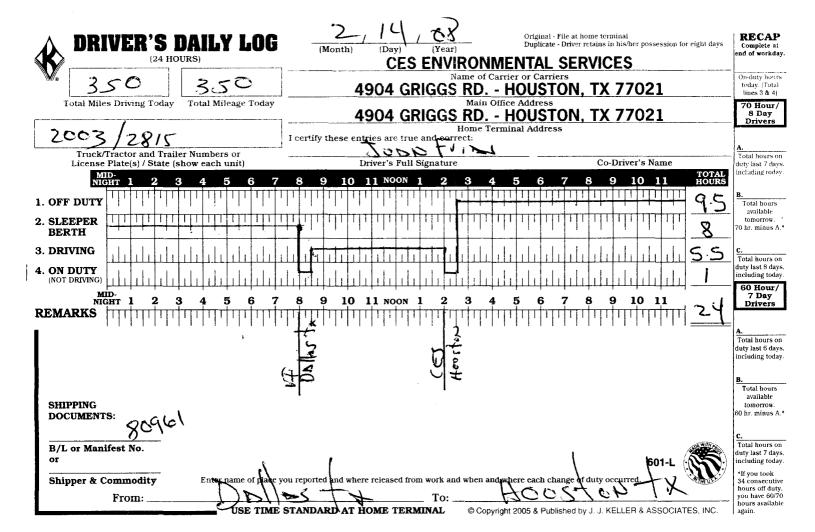




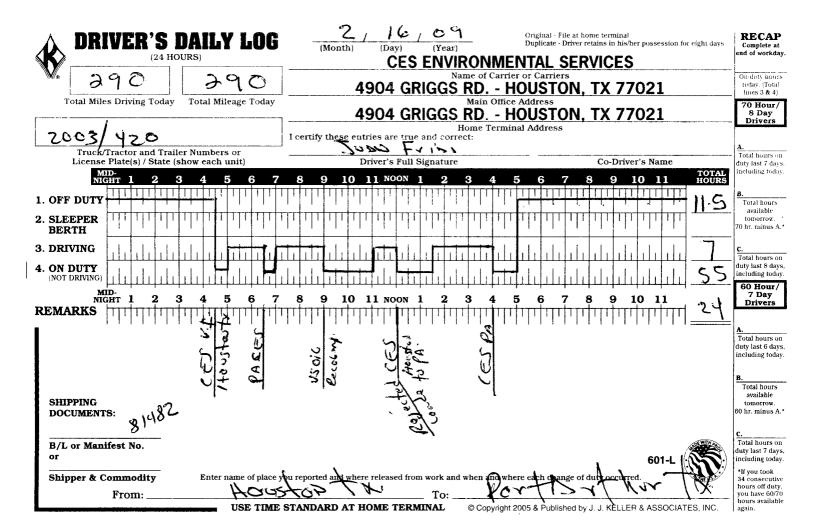


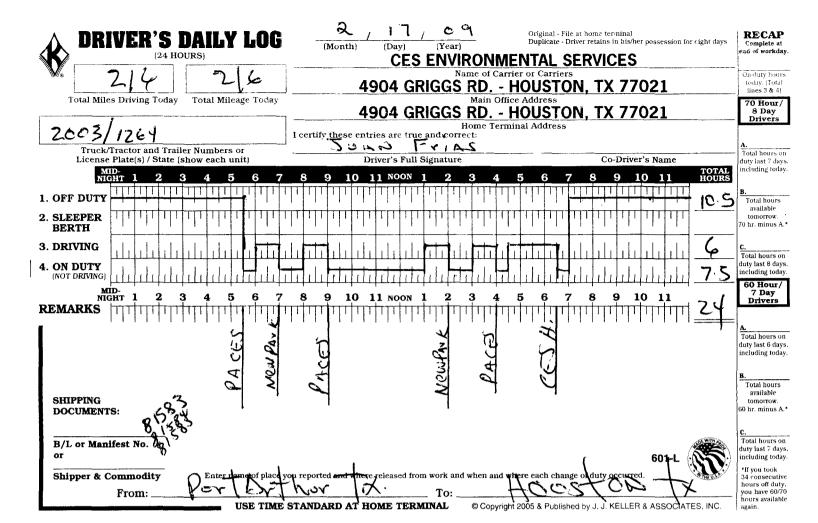


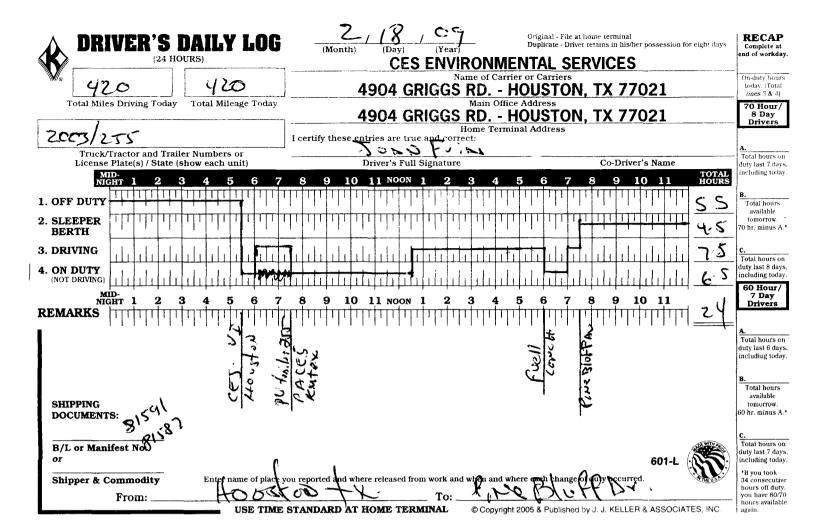


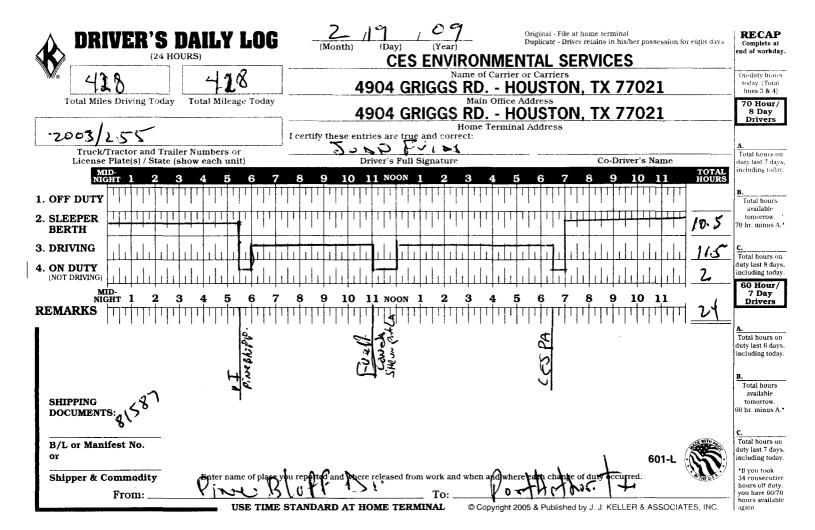


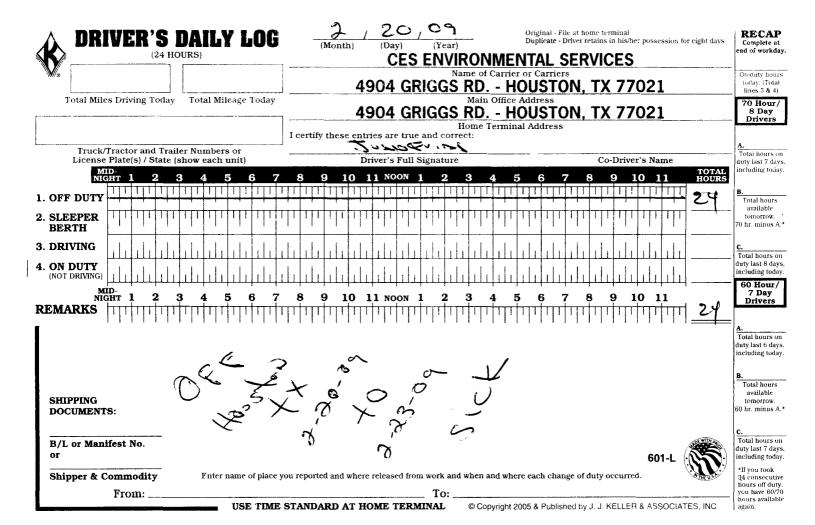
DRIVER'S DAILY LOG	(Month) (Day) (Year)  CES ENVIRONMI	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days	RECAP Complete at end of workday.
Total Miles Driving Today Total Mileage Today	Name of Carr. 4904 GRIGGS RD I	rier or Carriers HOUSTON, TX 77021 ce Address HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4) 70 Hour/ 8 Day
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)		inal Address  Co-Driver's Name	A. Total hours on duty last 7 days.
1. OFF DUTY 2. SLEEPER	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11 TOTAL HOURS	B. Total hours available tomorrow.
BERTH 3. DRIVING 4. ON DUTY (NOT DRIVING)			C. Total hours on duty last 8 days, including today.
NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11 	60 Hour/ 7 Day Drivers
			Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		KJ.	Total hours available tomorrow. 60 hr. minus A.*
**anifest No.  Enter name of place ye	u reported and where released from work and when and w	601-L where each change of duty occurred.	C. Total hours on duty last 7 days, including today.  *If you took 34 consecutive
TME.	To: To:	at 2005 & Published by J. J. KELLER & ASSOCIATES INC	hours off duty, you have 60/70 hours available

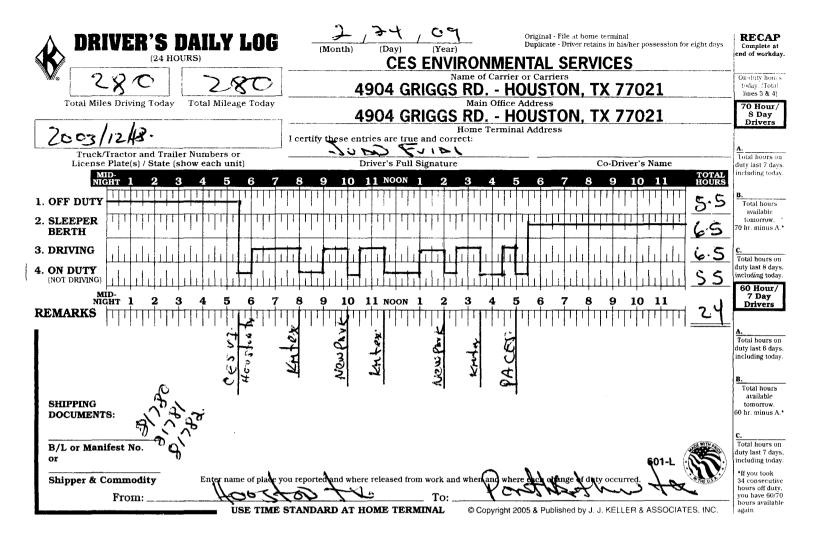


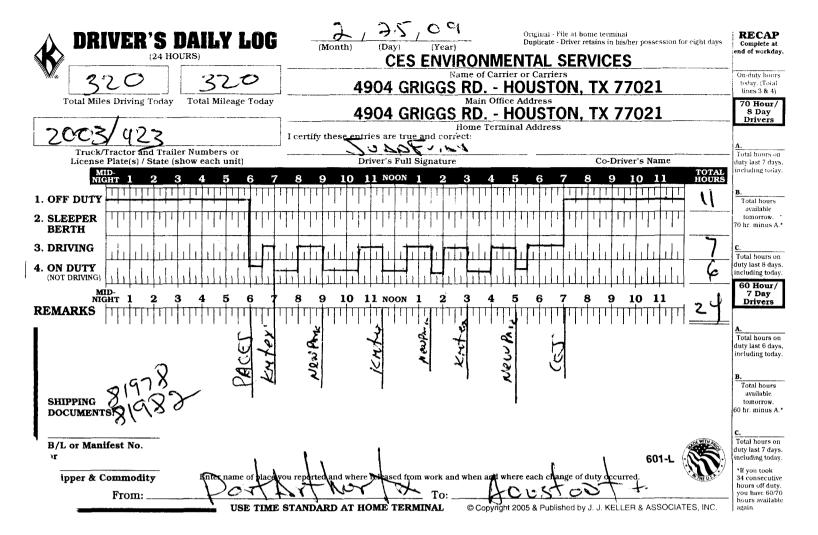


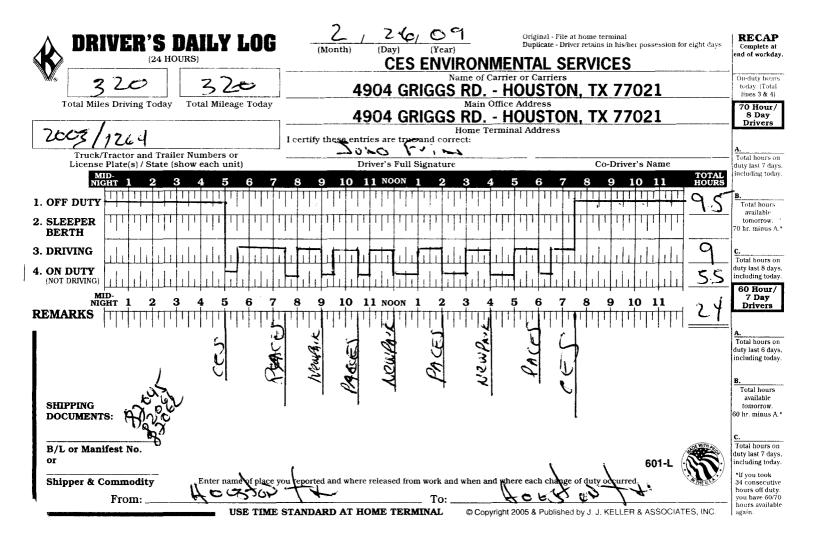


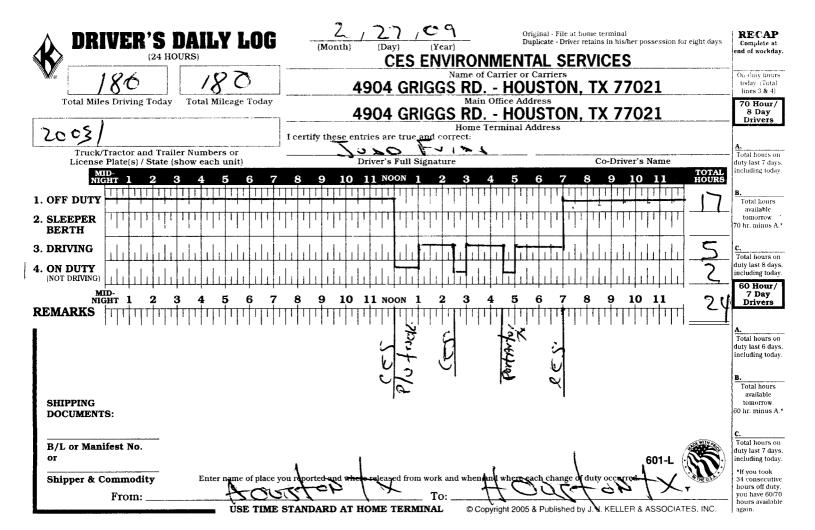


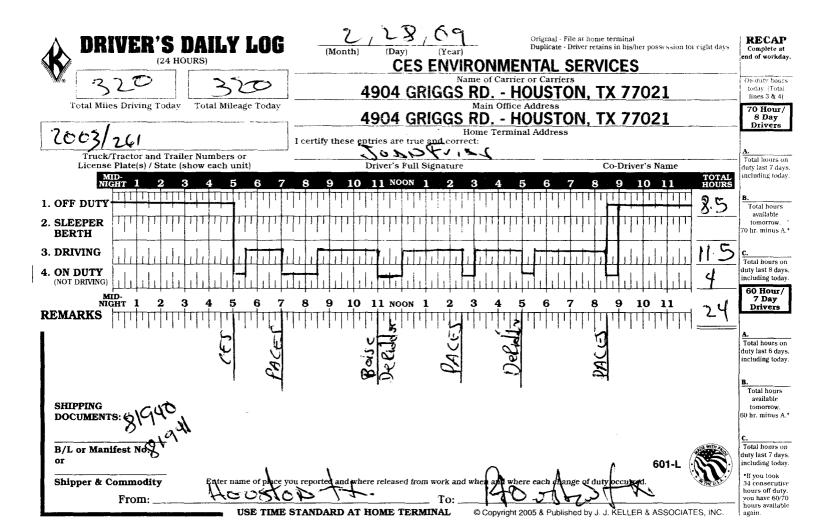








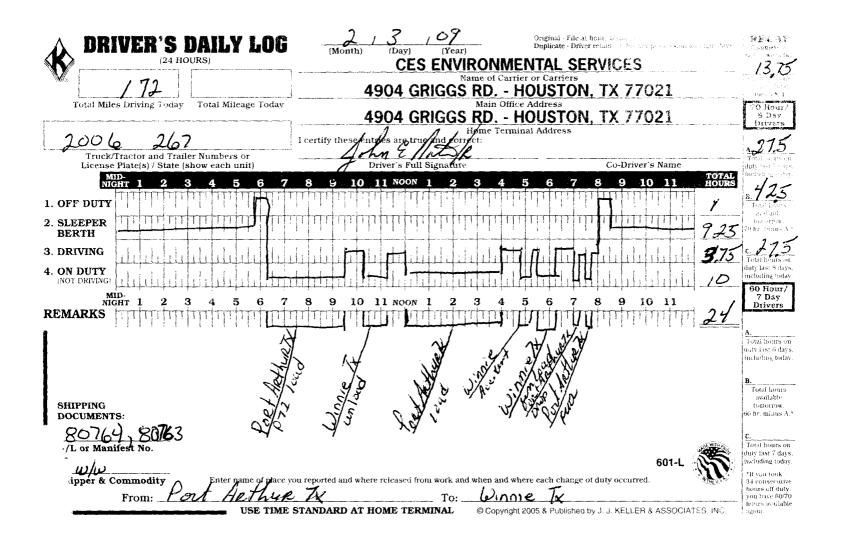


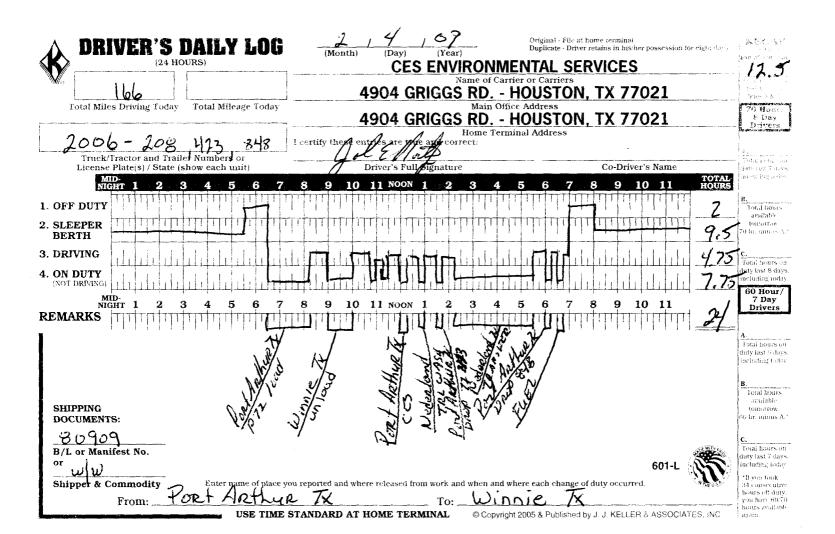


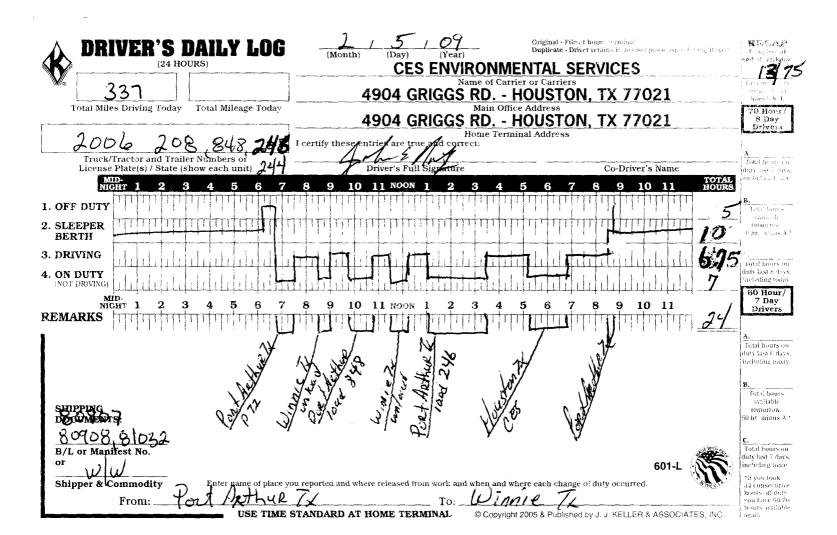
A DRIVER'S DAILY LOG		ginai - File at home terminai plicate - Driver retains in his/her possession for 1907 - 3	加勒基础等
(24 HOURS)	CES ENVIRONMENT. Name of Carrier or C 4904 GRIGGS RD HOU	Carriers	Transport of the second of the
Total Miles Driving Today Total Mileage Today	4904 GRIGGS RD HOU Home Terminal Ac	STON, TX 77021	70 Hoer 5 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	1 certify these entries are type any correct:  Driver's Full Signature	Co-Driver's Name	A. For home on duty has 7 hos.
1. OFF DUTY	8 9 10 11 NOON 1 2 3 4 5	6 7 8 9 10 11 TOTAL HOURS	B. Torut hours
2. SLEEPER BERTH 3. DRIVING			totaorres. 76 ar prime- A '
4. ON DUTY (NOT DRIVING) MID-			Total hours on duty last 8 days, including today.
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	m+Belview 7x		Total hours on Juty last 6 days, including today.
SHIPPING DOCUMENTS:			B. Total hours available tomorrow. 60 hr. minus 5.7
B/L or Manifest No.		601-L	C.  Total hours on dray last 7 days, including today.
	ou reported and where released from work and when and where each	ch change of duty occurred.	*If you took 34 consecutive hours off duty.
From:USE TIME	To: STANDARD AT HOME TERMINAL © Copyright 2005 8	& Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available again.

Griginal - File at home terminal

Duplicate - Driver retains in his/her posse series river's daily log RECAP Complete at and of workers **CES ENVIRONMENTAL SERVICES** 13,75 Name of Carrier or Carriers 220 4904 GRIGGS RD. - HOUSTON, Total Mileage Today Total Miles Driving Today Main Office Address 70 Hour/ 8 Day Drivers 4904 GRIGGS RD. - HOUSTON, TX 77021 Home Terminal Address 2006 006 267
Truck/Tractor and Trailer Numbers or A. Fold boars on duty lost 7 days. meludying colay. Driver's Full Signature License Plate(s) / State (show each unit) Co-Driver's Name 5 8 10 11 form nones
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70 hr minus A. 1. OFF DUTY 2. SLEEPER BERTH 3. DRIVING C. Total hours on duty last 8 days, including today. 4. ON DUTY (NOT DRIVING) 60 Hour/ 7 Day Drivers MID-NIGHT 5 6 8 9 10 11 NOON 5 10 REMARKS A. Total heurs ou duty last 6 days. including today. B. Total hours SHIPPING tomorrow. 60 lit. minus A.* DOCUMENTS: 80705 B/L or Manifest No. C. Total hours on duty last 7 days including today "If you took Shipper & Commodity Enter name of place you reported and where released from work and when and where each change of duty occurred 34 consecutive hours off duty, you have 60/70 hours scallable TO: Port ARther MIBelviewTX From: © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC. USE TIME STANDARD AT HOME TERMINAL agair







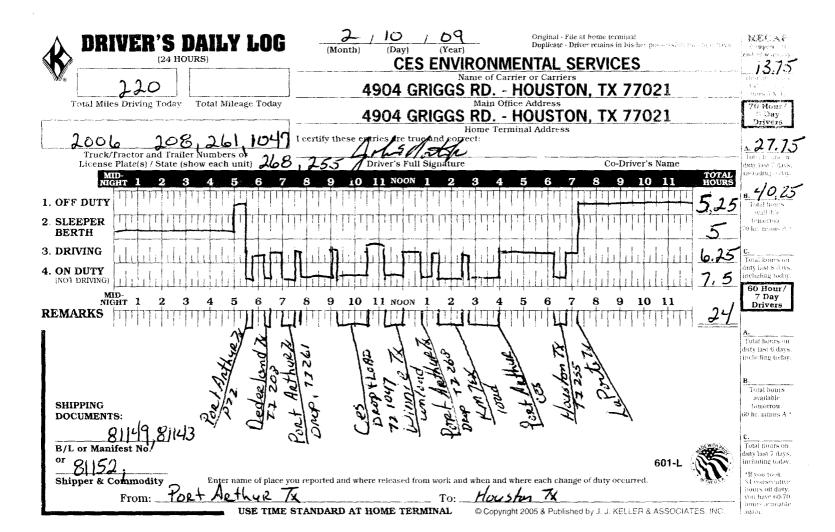
Original - File at home termina) Duplicate - Driver retains in his/her RELAS DRIVER'S DAILY LOG (24 HOURS) 14.25 CES ENVIRONMENTAL SERVICES Name of Carrier or Carriers 278 4904 GRIGGS RD. - HOUSTON, TX 77021 Total Miles Driving Today Total Mileage Today Main Office Address 70 Hour 3 Day Priver 4904 GRIGGS RD. - HOUSTON, TX 77021 06 208 171047 17638 certify the Truck/Fractor and Trailer Numbers of Home Terminal Address 2006 Driver's Full Signature Total hours on hutters to a cis, method is no ev. License Plate(s) / State (show each unit) 1267 Co-Driver's Name TOTAL HOURS 9 10 11 5 6 2 B.
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70 b. raturs A.* 1. OFF DUTY 2. SLEEPER BERTH 3. DRIVING 6 C. Total bours on duty last 8 days including today 4. ON DUTY (NOT DRIVING) 60 Hour/ 7 Day Drivers MID-NIGHT 10 11 NOON 5 9 10 11 REMARKS Total hours on duty last 6 days. including today. 8. Tatai hours ŝ available toreerrow. 60 br. minus A.* SHIPPING DOCUMENTS: 81046, 80655, 81043, 81056, 810 B/L or Manifest No. C. Total bours on duty last 7 days, including today. 4lf you took 3d consecutive hours off duty, you have 60/70 hours available again. Shipper & Commodity Enter name of place/you reported and where released from work and when and where each change of duty occurred. ARTHYR From: PORT 7🗸 Housken To: USE TIME STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.

A DRIVER'S DAILY LOG	$\frac{2}{\text{(Month)}}$ $\frac{7}{\text{(Day)}}$ $\frac{8}{\text{(Year)}}$	Original - File at home termina: Duplicate - Driver retains in his/her posses of the band, let days	RECAST Saul V
(24 HOURS)		ENTAL SERVICES	<b>ਦਿਸ਼ਨ</b> ਦਾ ਵੱਟ ਜਿਵਤੇ ਨ੍ਹਾਂ -
6		HOUSTON, TX 77021	Opense to contents to the total A. I
Total Miles Driving Today Total Mileage Today	Main Offi	ce Address	70 Hour/ à Day
	A A Home Term	HOUSTON, TX 77021	Drivers
Truck/Tractor and Trailer Numbers or	I certify these entries are true and correct:		Δ.
License Plate(s) / State (show each unit)	Driver's Full Signature	Co-Driver's Name	doty last increase and doty last increase and one of the v
NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11 TOTAL HOURS	
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2. SLEEPER BERTH			tomorrow. 70 hr. minus A.*
3. DRIVING	<u> </u>		C. Total hours on
4. ON DUTY (NOT DRIVING)			thity last 8 days. including today.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
REMARKS	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,	27_	A.
	Houston 7x		Total hours on duly last 6 days, including today.
	HOUSKI		interacting today.
			Total hours available
SHIPPING DOCUMENTS:			tomorrow. 66 hr. minus A.*
P.V W. If V		- ARWEL	C. Total hours on
B/L or Manifest No. or		601-L	duty last 7 days, including today.
Shipper & Commodity Enter name of place	ou reported and where released from work and when and w	there each change of duty occurred.	*If you took 34 consecutive hours off duty.
From:	To: © Copyright	at 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available

DRIVER'S DAILY	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight des	RECAP Complete at end of workday
Total Miles Driving Today Total Milea	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address	On-duty hours today, (femal lines 3 & 4) 70 Hour/ 8 Day
Truck/Tractor and Trailer Numbers o	4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address  I certify these entries are frequent correct:	Drivers A.
License Plate(s) / State (show each un	Driver's Full Signature Co-Driver's Name	duty last 7 days    divided for the first of
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SHIPPING DOCUMENTS:	Houshen Tx	B. Total fours available tomorrow 60 hr. minus A.
B/L or Manifest No. or Shipper & Commodity Enter nan	601-L of place you reported and where released from work and when and where each change of duty occurred.	C. Total hours on duty last 7 days including today  'It you took 34 consecutive
From:	To:  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours off duty. you have 60/70 hours available agout.

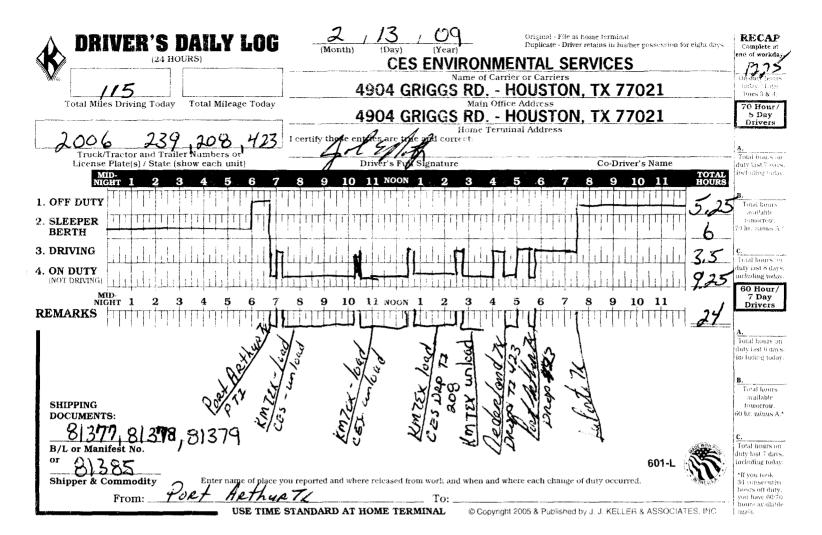
90 109 Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days RECAP VER'S DAILY LOG **CES ENVIRONMENTAL SERVICES** 14 Name of Carrier or Carriers Total Miles Driving Today Total Mileage Today today. Total lines 3 & 4 4904 GRIGGS RD. - HOUSTON, TX 77021 Main Office Address 70 Hour/ 4904 GRIGGS RD. - HOUSTON, TX 77021 3 Day Drivers Home Terminal Address 2006 \$23 208 A. Total hours on duty last 7 days, including today. Truck/Tractor and Trailer Numbers of License Plate(s) / State (show each unit) Co-Driver's Name 11 NOON 2 3 5 6 8 9 10 3 5 8 9 10 11 B. Total hours 6 1. OFF DUTY available tomorrow 70 hr minus A.* 2. SLEEPER BERTH 3. DRIVING Total hours on duty last 8 days, including today. 4. ON DUTY INOT DRIVING 60 Hour/ 7 Day Orivers MID-NIGHT 5 6 10 11 NOON 10 8 11 REMARKS A. Total hours on duty last 6 days including today. is, mie Total hours ž Ž available SHIPPING tomorrow. 60 hr. minus A.* DOCUMENTS: 2|136,81090 B/L or Marrifest No. Total hours on duty last 7 days, including today di you touk Enter name of place you reported and where released from work and when and where each change of duty occurred.

To: To the first the two courses. Shipper & Commodity 34 conscrutive hours off duty, you have 60:70 hours as itable Houston Th From: USE TIME STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES INC.



A DRIVER'S DAILY LOG	$\frac{2}{\text{(Month)}}$ $\frac{1}{\text{(Day)}}$ $\frac{9}{\text{(Year)}}$	Original - File at home terminal Duplicate - Driver retains in his/her possession for equal days	RELEGIC
(24 HOURS)	CES ENVIRONM	ENTAL SERVICES	/3 25
252		ier or Carriers	The second second
Total Miles Driving Today Total Mileage Today		HOUSTON, TX 77021	inges a & d
Total Integral Total		HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
2006 1047	Home Term I certify these entries are try and correct:	ninal Address	San Sacrement in a month
Truck/Tractor and Trailer Numbers or	4 of Illing		A. Tota Lours on
License Plate(s) / State (show each unit)	Driver's Full Signature	Co-Driver's Name	duty Let 7 days, including today
NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11 HOURS	
1. OFF DUTY		6.25	Total house
2. SLEEPER BERTH		7.5	to all the tomorrow.  70 in minus 3.5
3. DRIVING		11nr 5.5	E. Total hours on
4. ON DUTY [NOT DRIVING]	<del>┪</del>	7.75	duty last 8 wys. including foday.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11	7 Day Drivers
REMARKS		24	
1	A TA	1.18	A. Total hears on
₩	M M 3 13	4 12 3	duty (ast 6 days, including today,
<b>&gt;</b> /_	10 15 July 2016.	英 かりま	
78/4	No. 3 No. 3 3 3	362 312 3	Total hours
SHIPPING	11, 2 2 7 3	543 20 31	available tomorrow, 66 hr. minos A.*
DOCUMENTS:	K/J 2/3 EN 3	35/10/21	oo m. minos A.
B/L or Manifest No.	7.	THE WITH A	C. Total hours en
or		601-L	duty last 7 days. including today.
Shipper & Commodity Enter name of place y	ou reported and where released from work and where and w		'If you took 34 consecutive
From: La Porte TX	To: Port	Anthum Tx	hours off duty. you have 80/70
	STANDARD AT HOME TERMINAL © Copyrigh	nt 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	nours scaltable again

A DRIVER'S DAILY LOG	2 / 12 / 27 Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days	RECASE Consider of the lead of the control
(24 HOURS)	CES ENVIRONMENTAL SERVICES	1025
157	4904 GRIGGS RD HOUSTON, TX 77021	Constitution is contain to a co
Total Miles Driving Today Total Mileage Today	Main Office Address	70 Hour
/	4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address	8 Day Drivers
2006 420	I certify these entries are true and confect:	15/25
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	Total is non a dury nest 7 days
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	are relieg to his.
1. OFF DUTY	3	B. 18.73
2. SLEEPER BERTH		topos w 70 b. mines A.*
3. DRIVING		C. Total hours on
4. ON DUTY (NOT DRIVING)	6,75	arety last 8 days.
MID- NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers
	W / A . I M	A. Total hours on duty last 6 days.
	1 N 3 N 3	including today.
2)	多少多多	B. Total hours
SHIPPING	1 72 1 3 E 2 I	available tomorrow
DOCUMENTS:	18 08 , 3 CR	60 lm. minus A.3
81318, 81319	3, 4	C.
B/L or Marrifest No.	601-L	Total hours on  duty last 7 days.  - lineluding today.
Shipper & Commodity / Enter name of place y	you reported and where released from work and when and where each change of duty occurred.	*h you took 34 consecutive
From: Port Arthur	To: Winnie To	bours off duty. you have 60/70
	STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available again.

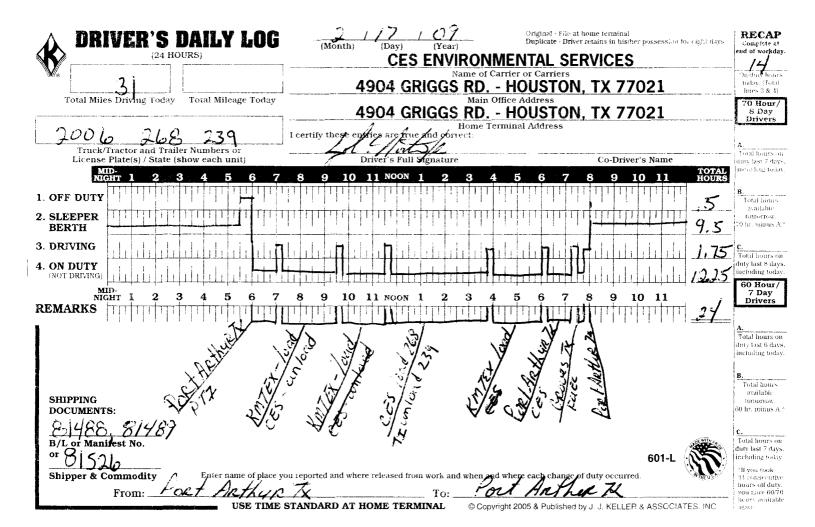


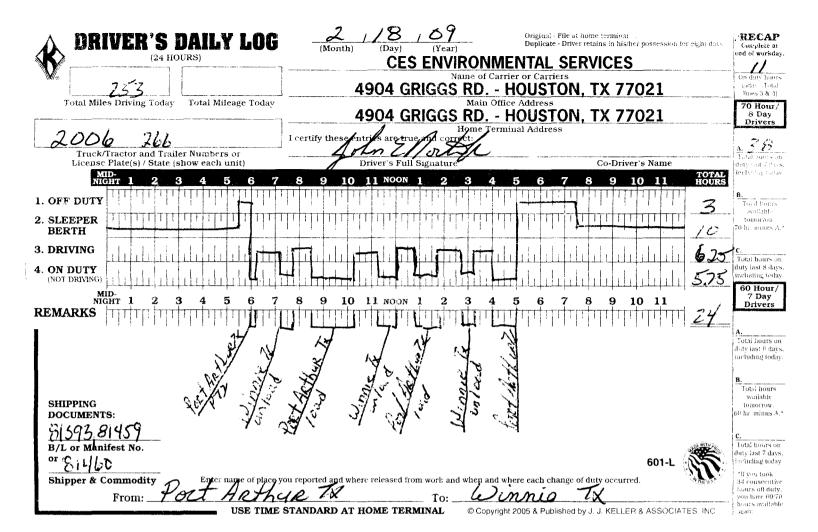
DRIVER'S DAILY LO	G 2 / 4 / 59 Original - File as home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP Complexe at each of worlday
Total Miles Driving Today Total Mileage Tod	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On dry hour- today (Icta bines 3 & 4 70 Hour/ 8 Day
2006 Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Home Terminal Address  I certify these entries are true and correct:	A. Total bours on duty had 7 bays
1. OFF DUTY 2. SLEEPER	7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 TOTAL HOURS	B. Total hours available tomorrow.
BERTH 3. DRIVING 4. ON DUTY		70 hr. mons A.  C.  Total hours on duty last 8 days, including today.
MID- NIGHT 1 2 3 4 5 6 REMARKS	7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
		A. Fotal hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		Fotal hours available tomorrow. 60 br. minus A.*
B/L or Manifest No.	601-L (601)	C. Total hours on duty last 7 days, including today.
From:	To:  ME STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	34 consecutive hours off day, you have 60/70 bours wallable again.

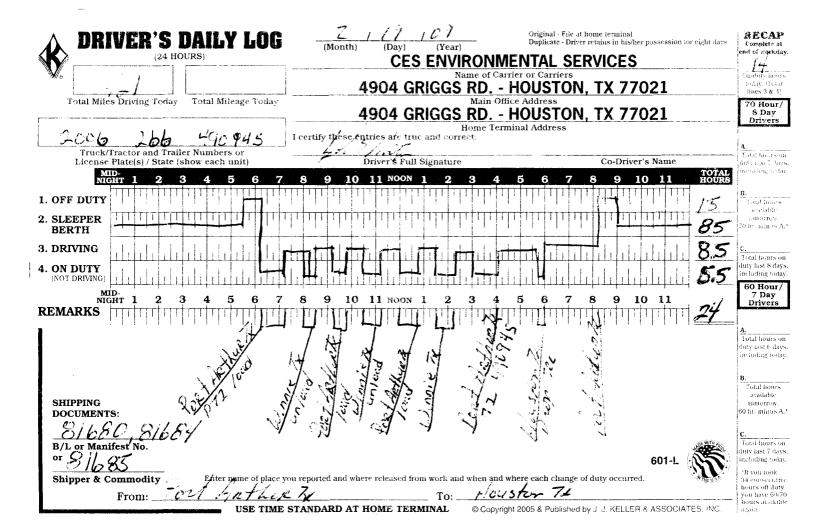
DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday
Total Miles Driving Today Total Mileage Today	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address 4904 GRIGGS RD HOUSTON, TX 77021	Constaty hours today, (Total lines 3 & 1)  70 Hour/ 8 Day Drivers
2006  Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Home Terminal Address I certify these entries are type and correct:    Driver's Full Signature   Co-Driver's Name	A. Total hours on duty last 7 days
1. OFF DUTY 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 TOTAL HOURS	B. Total cours  evailable
2. SLEEPER BERTH 3. DRIVING		tomorrow. 70 hr. gunus A.  C.  Total beurs on
4. ON DUTY (NOT DRIVING)  MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 7/	duty last 8 days including today. 60 Hour/ 7 Day Drivers
REMARKS	La Porte TX	A. Fotal hours on duty last 6 days, including today
SHIPPING		B. Total hours available tomorrow.
B/L or Manifest No.	601-L	C. Total bours on duty last 7 days, including today.
From: La Porte Tx	To: Copyright 2005 & Published by J. J. KELLER & ASSOCIATES. INC.	Aliyou took 34 consecutive hours off dury, you have 60/70 hours waitable again.

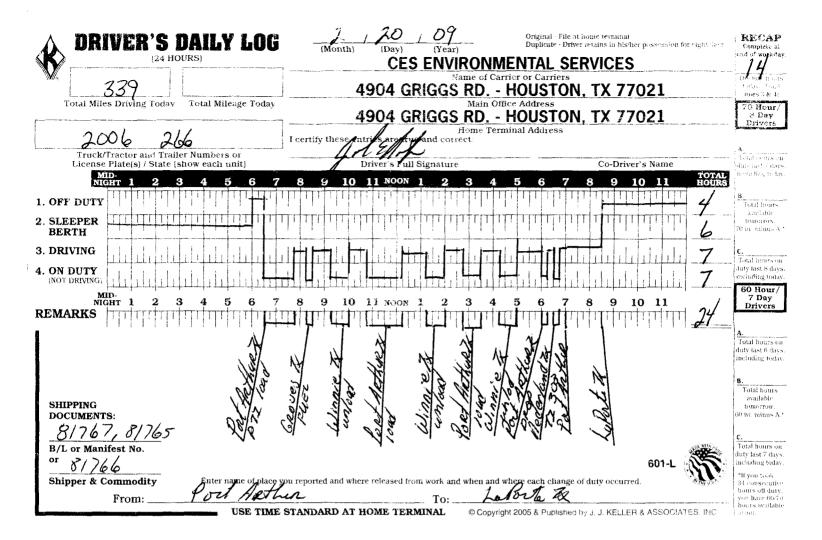
107 116 Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days RECAP VER'S DAILY LOG Complete at ad of workday. (24 HOURS) **CES ENVIRONMENTAL SERVICES** 87 today (Total tines 3 & 4) 4904 GRIGGS RD. - HOUSTON, TX 77021 Total Miles Driving Today Total Mileage Today Main Office Address 70 Hour/ 8 Day Drivers 4904 GRIGGS RD. - HOUSTON, TX 77021 Home Terminal Address Truck/Tractor and Trailer Numbers or 2006 Driver's Full Signature tota hours on duly last 1 days including welay License Plate(s) / State (show each unit) Co-Driver's Name 11 NOON 2 9 10 2 3 8 9 10 3 B. 58 Fores homes available fomorrow. 70 br. minos A. 5 6 6 1. OFF DUTY 2. SLEEPER BERTH 3. DRIVING C. Total hours on duty last 8 days, including today. 4. ON DUTY (NOT DRIVING) 60 Hour/ 7 Day Drivers MID-NIGHT 3 3 8 9 10 11 NOON 1 2 5 10 REMARKS A. Total hours on duty last 6 days. including today B. Total hours SHIPPING tomorrow. 60 hr. minus A.* DOCUMENTS: 81432 8143 B/L or Manifest No. C. Total hours on duty last 7 days. or AL 31 Shipper & Commodity including today M you took 34 consecutive hours off duty, you have 60.70 hours available again. Enter name of place you reported and where released from work and when and where each change of duty occurred.

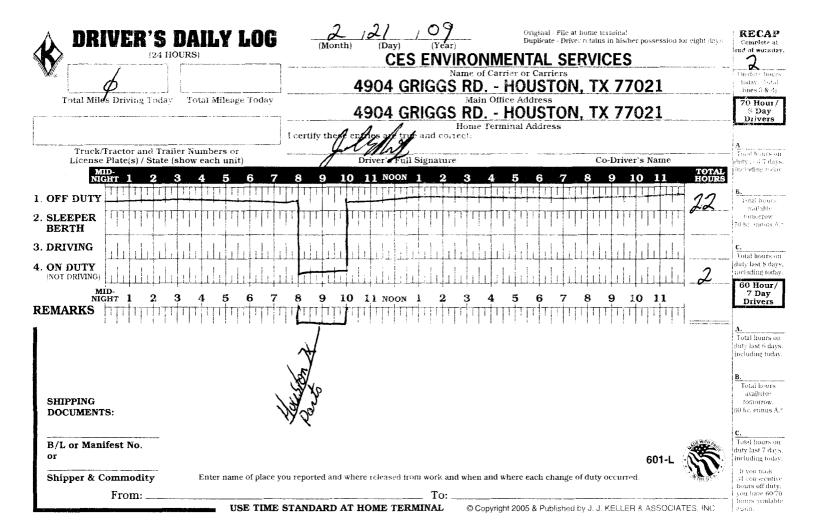
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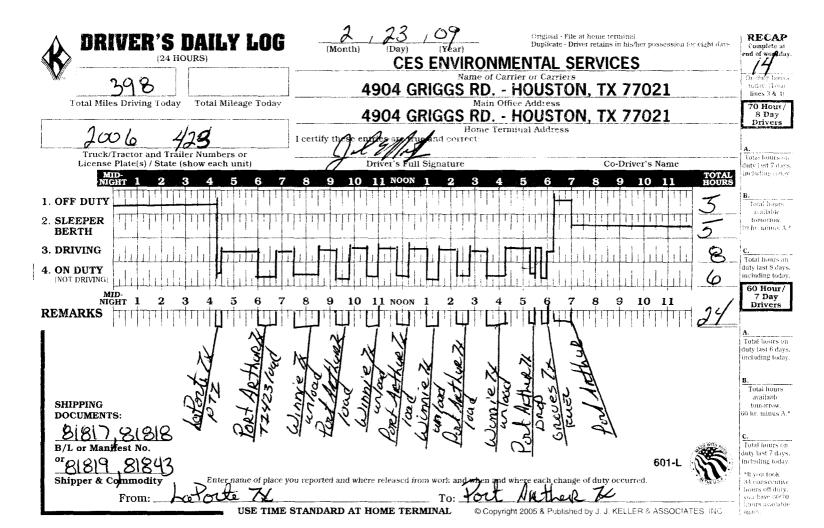


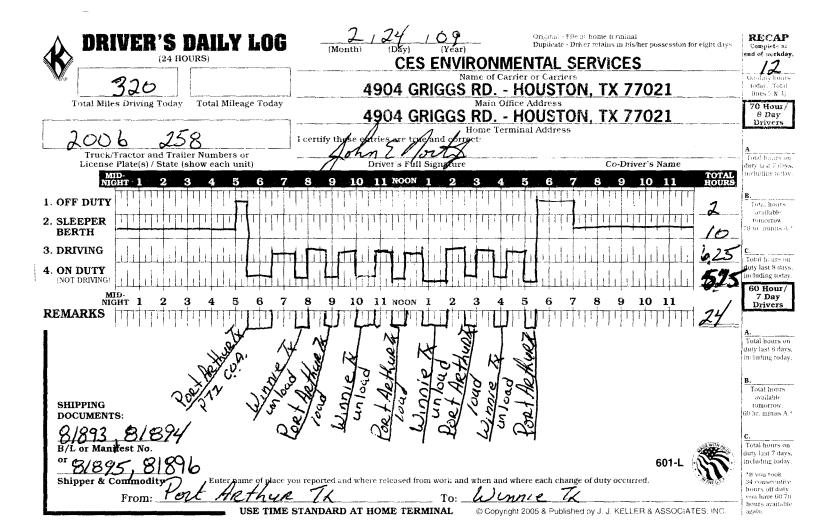


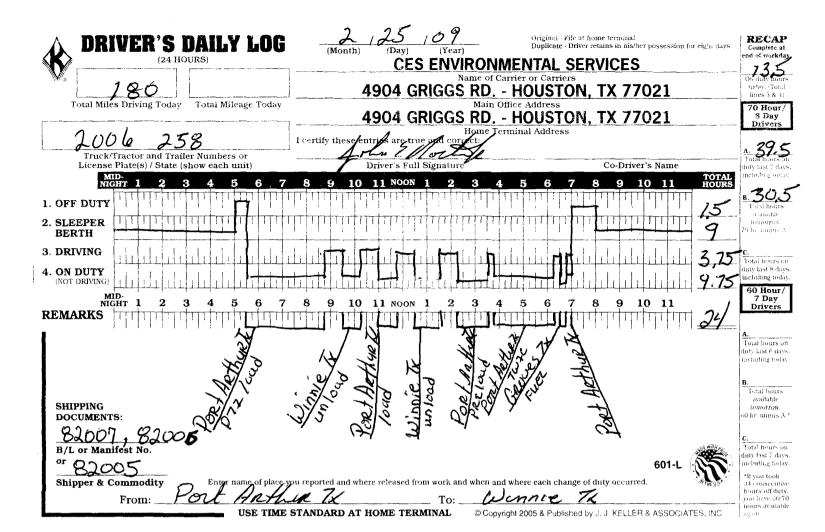


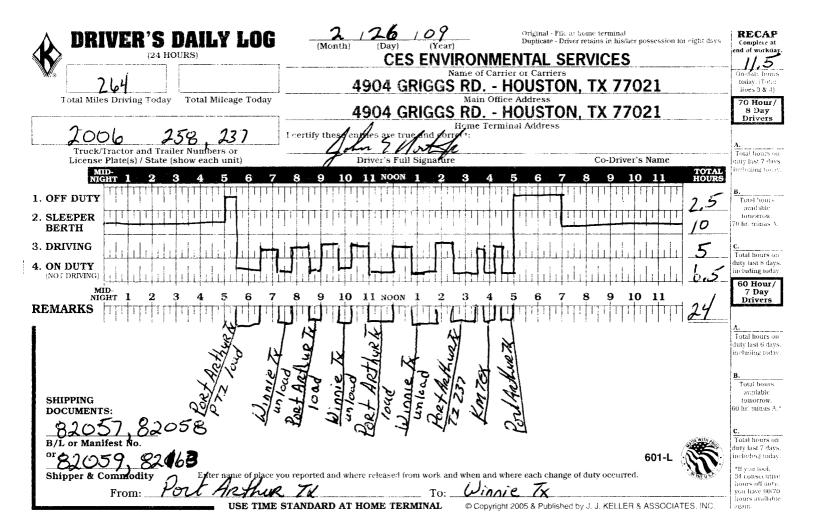


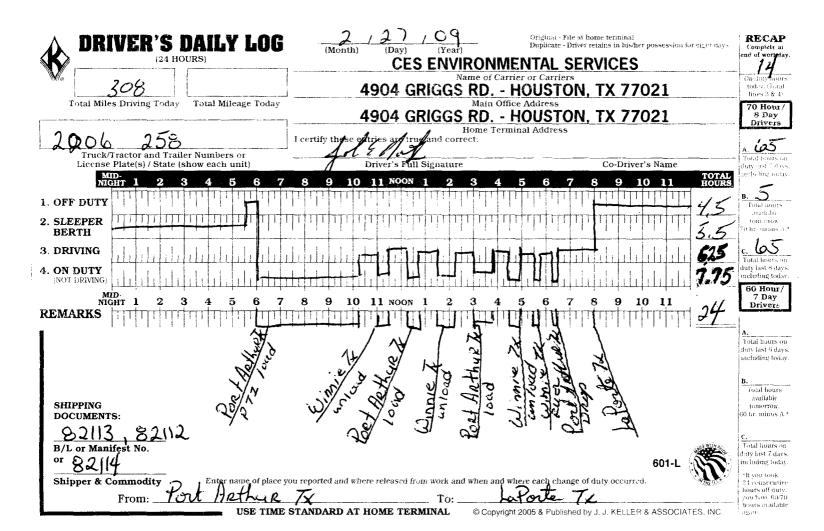
	DAILY LOG	7 / 27 / 09 General - File at home terminal Duplicate - Driver retains in his/her possession for eight days CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
<b>W</b>		Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	Gustaty hours today (Total lines 3 & 4)
Total Miles Driving Today	Total Mileage Today	4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
2006 Truck/Tractor and Trai	la N	Home Terminal Address I certify these entries are frue and correct:	<u>A</u> .
License Plate(s) / State		Driver's Fall Signature         Co-Driver's Name           8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	Total nours on duty last 7 days, including today.
1. OFF DUTY		8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 ROURS  11 11 11 11 11 11 11 11 11 11 11 11 11	B. Total hours available tomorrow. 70 hr. minus A.*
BERTH 3. DRIVING 4. ON DUTY (NOT DRIVING)			C. Total hours on duty last 8 days.
MID-NIGHT 1 2 REMARKS	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
		La Porte TX	Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:			B. Total hours available temorrow 60 hr. minus A.*
B/L or Manifest No. or		601-L	C. Total hours on duty last 7 days, including today.
Shipper & Commodity	Enter name of place y	rou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty.
From:	USE TIME	To: STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60: 70 hours available agent.







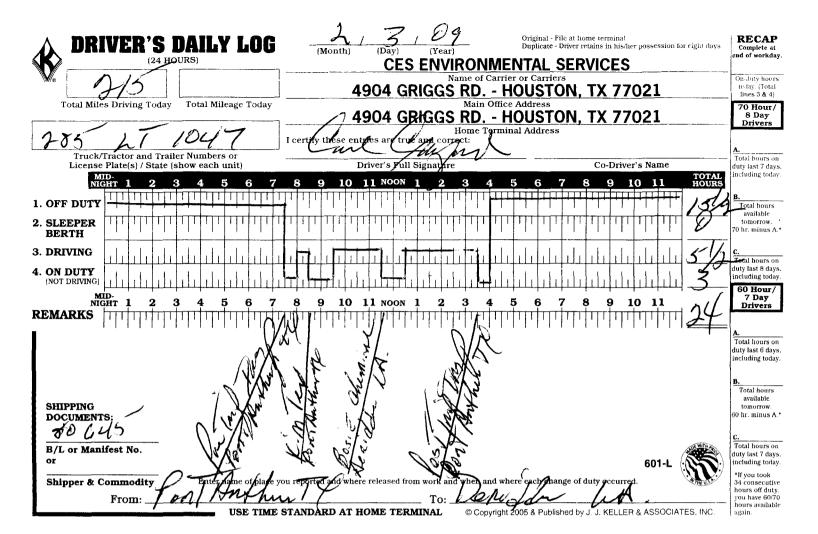


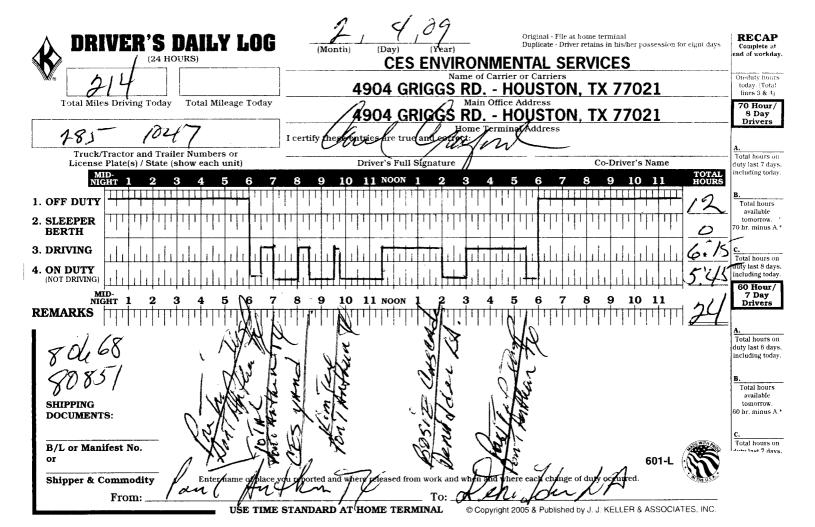


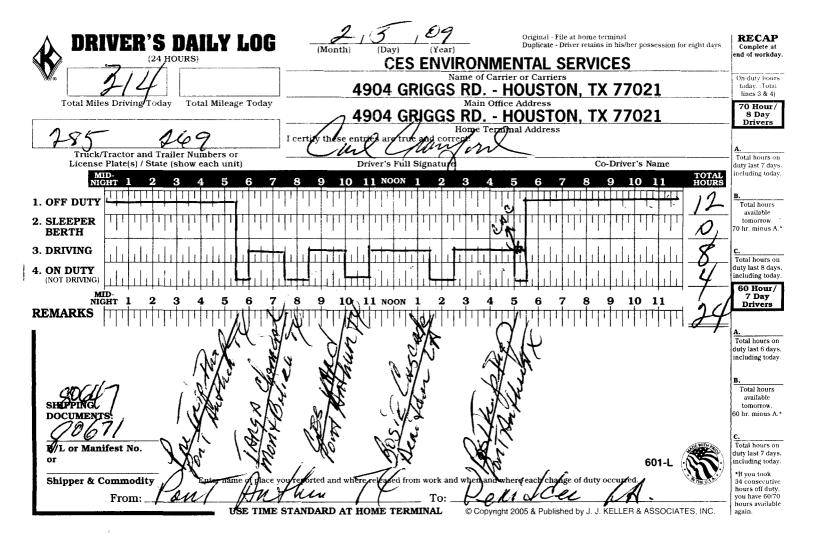
DRIVER'S DAILY	CES ENVIRON Name of	2 28 09 Original - File at home terminal Duplicate - Driver retains in his/her possession for eight day.  CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers										
		- HOUSTON, TX 77021	roday (Total Imes 3 & 4)									
Total Miles Driving Today Total Mile		Office Address - HOUSTON, TX 77021	70 Hour/ 8 Day Drivers									
2006	I certify these extries are type off correct	ferminal Address	465									
Truck/Tractor and Trailer Numbers License Plate(s) / State (show each t		Co-Driver's Name	Total hours on iduty last / days.									
MID- NIGHT 1 2 3 4 5	5 6 7 8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 TOTAL HOURS	including today									
1. OFF DUTY		24	B. Total hours									
2. SLEEPER BERTH			s.obable tomorrow 70 hr. minns A.1									
3. DRIVING			c 65									
4. ON DUTY			Total hours on duty last 8 days including today.									
MID-NIGHT 1 2 3 4 5	5 6 7 8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers  A. Total hours on									
	La Porte 72		duty last 6 days, including today.									
SHIPPING DOCUMENTS:			B. Total hours available tomorrow 60 hr. minus A.*									
B/L or Manifest No.		601-L	Total hours on duty last 7 days, including today.									
Shipper & Commodity  From:	name of place you reported and where released from work and when a	and where each change of duty occurred.	34 consecutive hours off duty, you have 50 70									
riom:	USE TIME STANDARD AT HOME TERMINAL © Cop	pyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available									

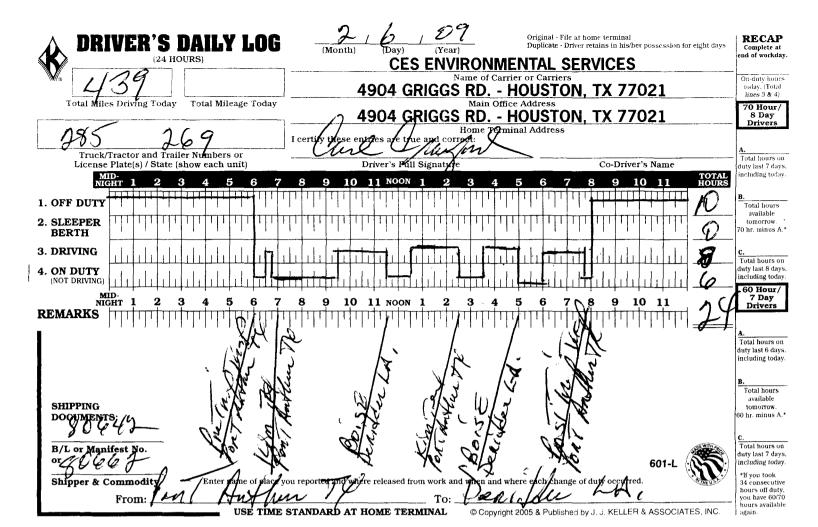
DRIVER'S DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers	RECAP Complete at end of workday.
	4904 GRIGGS RD HOUSTON, TX 77021	today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today	Main Office Address 4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day
185	Home Terminal Address I certify these entries are true and correct:	Drivers
Truck/Tractor and Trailer Numbers or	Driver's Pull Signature Co-Driver's Name	A. Total hours on
License Plate(s) / State (show each unit)  MID- NIGHT 1 2 3 4 5 6 7	Driver's Pull Signature Co-Driver's Name  8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	duty last 7 days, including today
1. OFF DUTY		B. Total hours available
2. SLEEPER BERTH		tomorrow. 70 hr. minus A.*
3. DRIVING 4. ON DUTY		C. Total hours on duty last 8 days,
4. ON DUTY (NOT DRIVING)		including today.
NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers
		Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:	OFF Dufy	Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No.	601-L	C. Total hours on duty last 7 days, including today.
Shipper & Commodity Enter name of placely From:	reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty. you have 60/70
	STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available again.

DRIVER'S DAILY LOG  (Month) (Day) (Year)  CES ENVIRONMENTAL SERVICES  Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
Name of Carriers 4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address	On-duty nours today. [Total lines 3 & 4]
4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address  I certify those entries are true and correct.	8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)  Driver's Fall Signature  Co-Driver's Name	Total hours on duty last 7 days, including today.
NIGHT 1 2 3 4 5 6 7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS  1. OFF DUTY  2. SLEEPER BERTH	B. Fotal hours available tomorrow. 70 hr. minus A.*
3. DRIVING 4. ON DUTY (NOT DRIVING)	C. Total hours on duty last 8 days, including today.
NIGHT 1 2 3 4 5 6 7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
18066	Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:	Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No. or 601-L	C. Total hours on duty last 7 days, including today. *If you took
Shipper & Commodity  Enter name of place you resorted and where released from work and when and where each change of duty occurrent  From:  USE TIME STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. C. KELLER & ASSOCIATES, INC.	34 consecutive hours off duty, you have 60/70 hours available again.

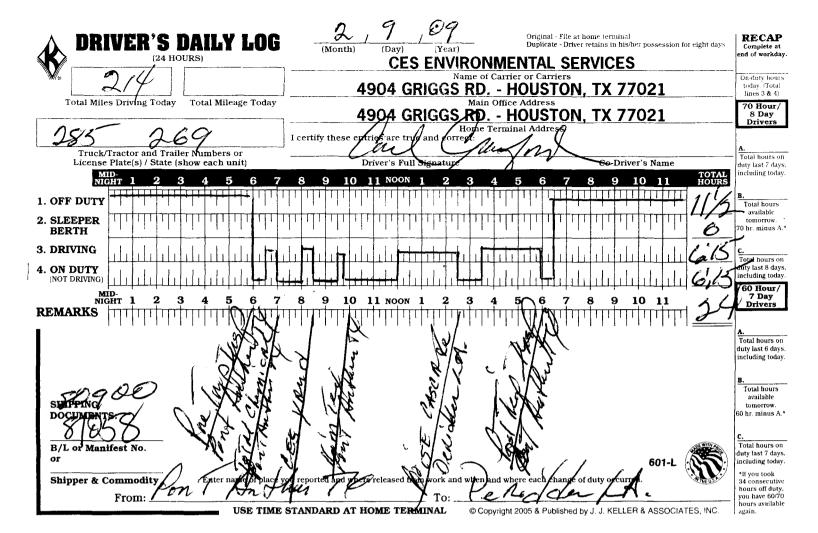


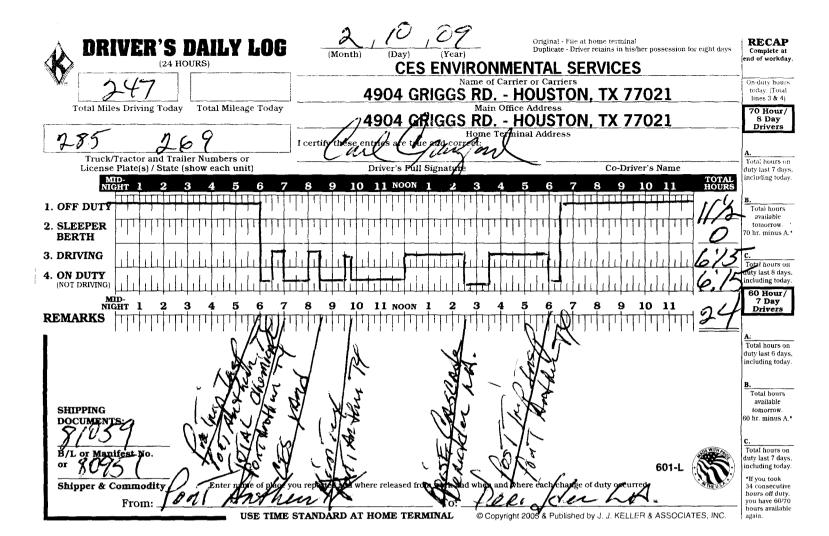






DRIVER'S DAILY LOG	2,78,89 (Month) (Day) (Year) Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
W/6	4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. (Total fines 3 & 4)
Total Miles Driving Today Total Mileage Today	Main Office Address  4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day
285	Home Terminal Address I certify these entries are true and correct:	Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	A. Total hours on
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	duty last 7 days, including today.
1. OFF DUTY	<u> </u>	B. Total hours available
2. SLEEPER BERTH		tomorrow. 70 hr. minus A.*
3. DRIVING		C. Total hours on
4. ON DUTY (NOT DRIVING)		duty last 8 days, including today.
NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
	OFF Duly	Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No.	1-7-8-09 601-L	C. Total hours on duty last 7 days, including today. *If you took
Shipper & Commodity Enter name of places	u reported and where released from work and when and where each change of duty occurred.  To:	34 consecutive hours off duty, you have 60/70
	STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available again.



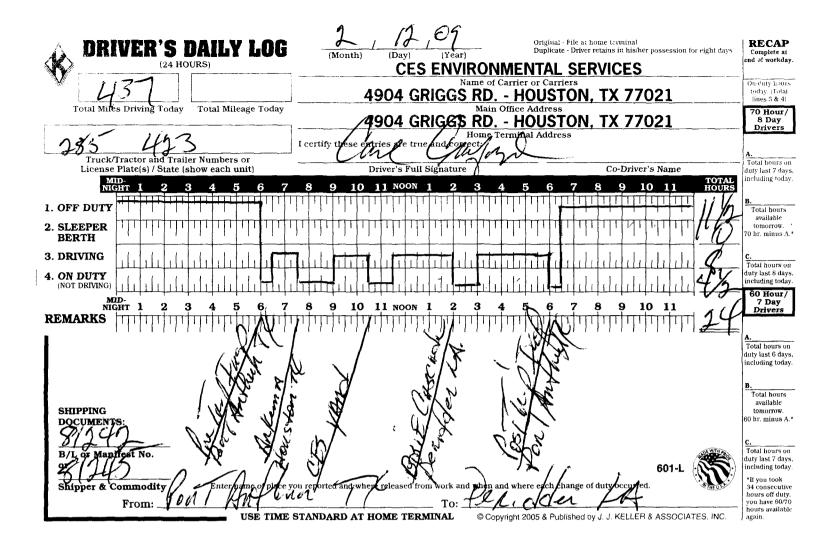


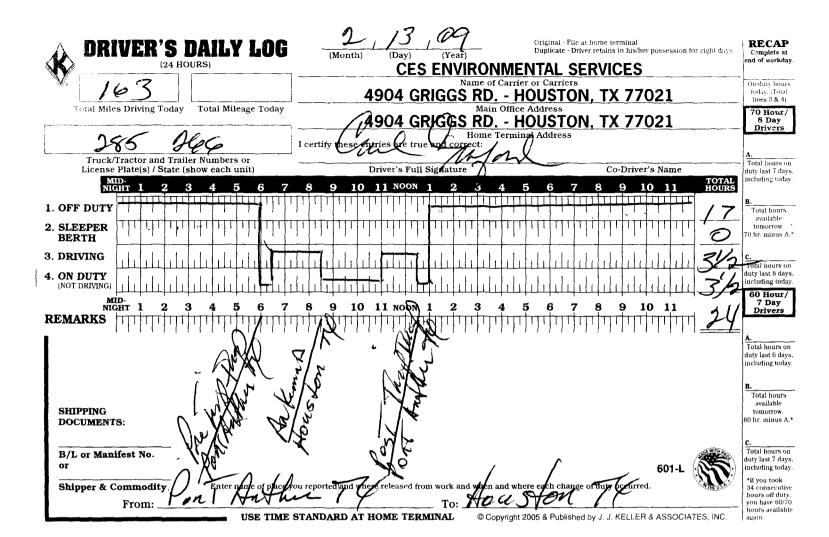
IVER'S DAILY LOG Original - File at home terminal RECAP Duplicate - Driver retains in his/her possession for eight days Complete at end of workday, (24 HOURS) **CES ENVIRONMENTAL SERVICES** On-only hours today, (Total lines 3 & 4) Name of Carrier or Carriers 4904 GRIGGS RD. - HOUSTON, TX 77021 Total Miles Driving Today Total Mileage Today Main Office Address 70 Hour/ 4904 GRIGGS RD. - HOUSTON, TX 77021 8 Day Drivers Home Tempinal Address 198 47473 Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit) Total hours on duty last 7 days, including today. Driver's Full Signature Co-Driver's Name MID-NIGHT 1 10 11 NOON 9 10 11 2 3 4 5 6 8 2 3 5 6 7 8 1. OFF DUTY Total hours available tomorrow. 70 hr. minus A.* 2. SLEEPER BERTH 8. 3. DRIVING Total hours on duty last 8 days, including today. 4. ON DUTY (NOT DRIVING) Ш 60 Hour/ 7 Day Drivers 8 9 10 10 REMARKS A. Total hours on duty last 6 days. including today. Total hours available SHIPPING 60 hr. minus A.* DOCUMENTS: 8089 C. Total hours on duty last 7 days. B/L or Manifest No. 601-L including today. *If you took 34 consecutive hours off duty, you have 60/70 hours available Shipper & Commodity kin on From:

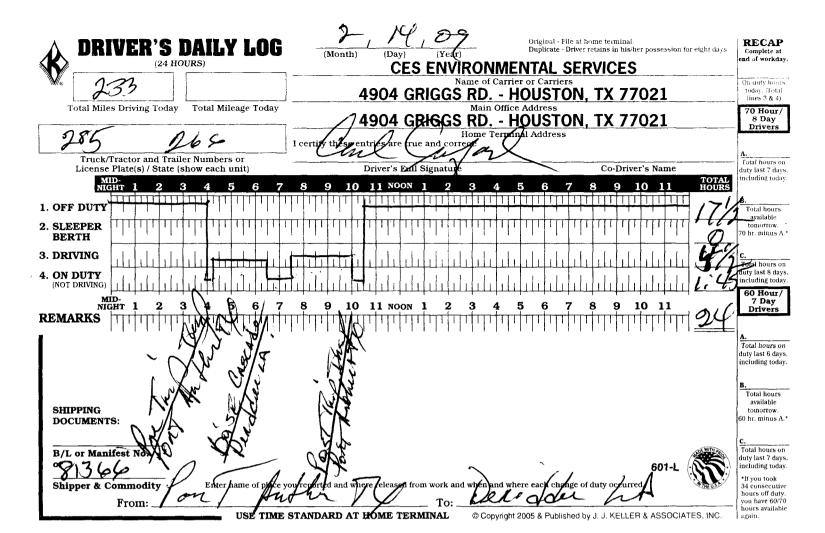
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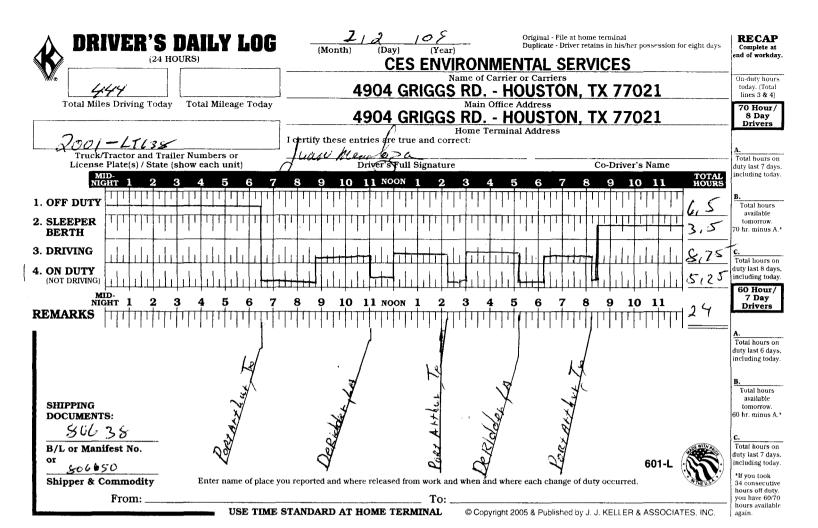
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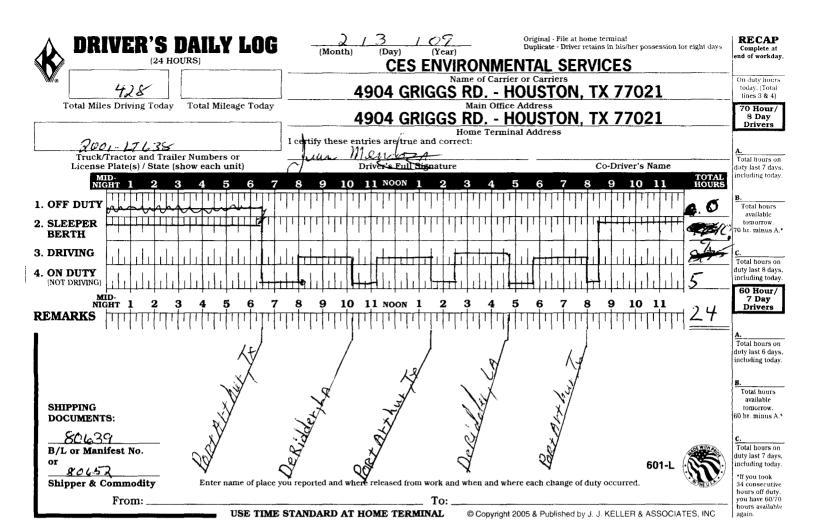


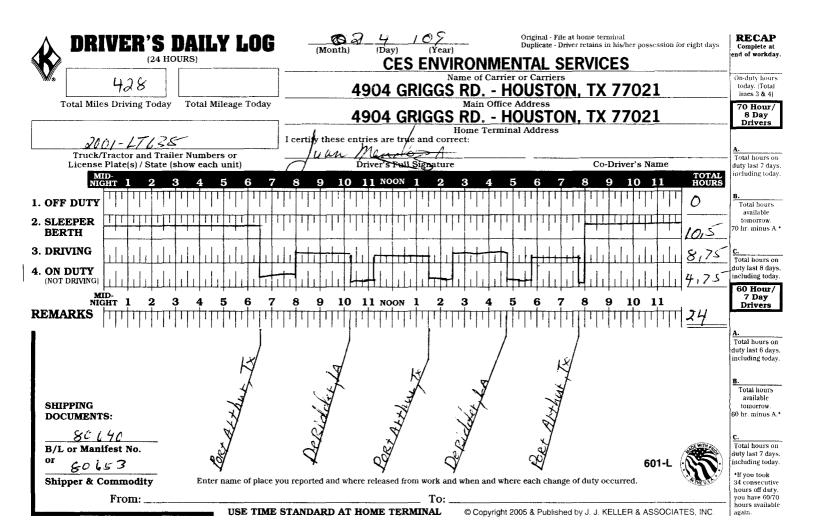


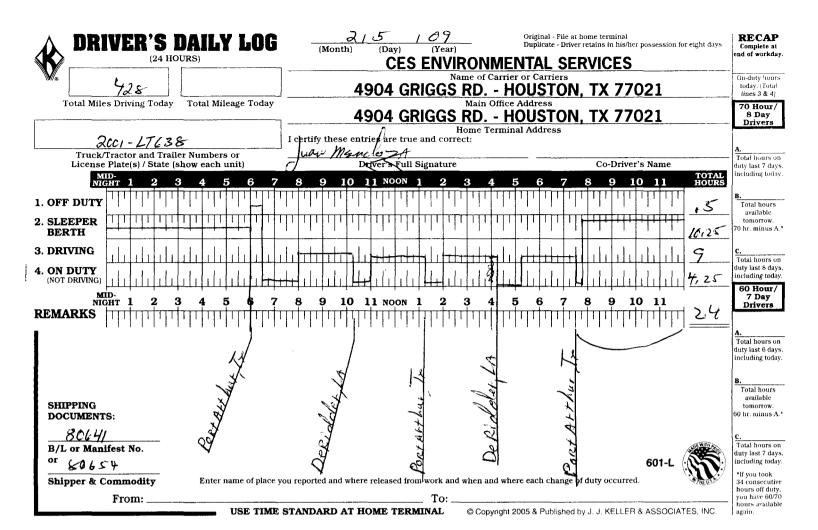


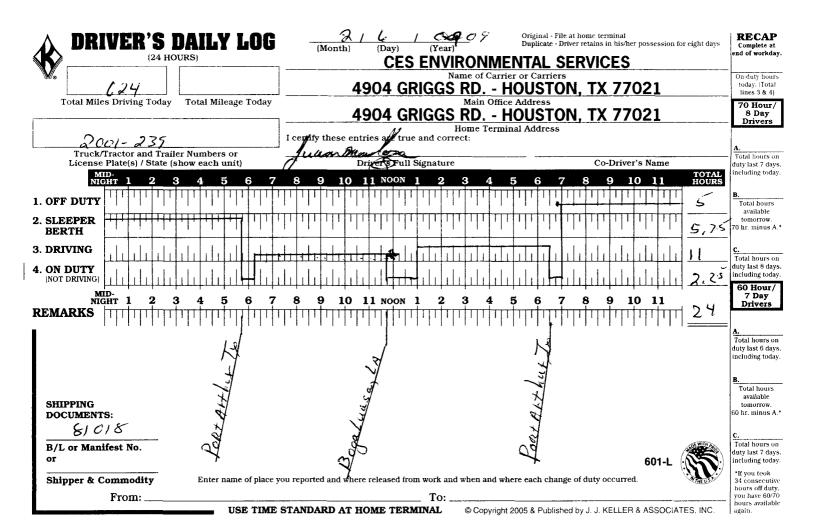
DRIVER'S I	DAILY LOG	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days  CES ENVIRONMENTAL SERVICES  Name of Carrier or Carriers										
		4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)									
Total Miles Driving Today	Total Mileage Today	Main Office Address  4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address	70 Hour/ 8 Day Drivers									
		I certify these entries are true and correct:										
Truck/Tractor and Trail License Plate(s) / State (s		Driver's Full Signature Co-Driver's Name	Total hours on duty last 7 days.									
MID- NIGHT 1 2	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	TOTAL including today.									
1. OFF DUTY 2. SLEEPER		<del>┆╵╏┇┩╒╏┇┩╒╏┇┩╒╏┇┩╒╏┇┩╒</del> ┰╌┾┲┲┩╌┰╌╀╌┎╃╌╌╂┱╌╃╅┰╌┼┰┲╃┰┯╃┰┯╃┰┰┼┰┰┼┰┰┼┰┰╇┰┯╋┰┰┼	Z H Total hours available tomorrow.									
BERTH			70 hr. minus A.									
3. DRIVING 4. ON DUTY		<u> </u>	C. Total hours on duty last 8 days.									
(NOT DRIVING)	<del>┠</del> ┺┻┹╀┻┸┆┼┸┸┸┼┸	<del>╎╎┧┇┇╏╎╎╏┋┋╎╎╏┋┇</del> ┼┼ <del>╏┋┇┪╏╏╏╏╏┪</del> ┇╃┼┼╀┋╌╏┇┋╏┪┇╃╁┼╃╏┆┚┩┼╎┇╏┇┇╃┼┼┷┨╌	60 Hour/									
REMARKS TO THE PROPERTY OF THE	3 <b>4</b> 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers									
		off Duty	Total hours on duty last 6 days including today									
SHIPPING DOCUMENTS:		Port Althur To	B. Total hours available tomorrow. 60 hr. minus A.									
B/L or Manifest No.		601-L (	C. Total hours on duty last 7 days including today.									
Shipper & Commodity	Enter name of place ye	ou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty.									
From:	USE TIME	To: To: Copyright 2005 & Published by J. J. KELLER & ASSOCIATES	you have 60/70 hours available again.									



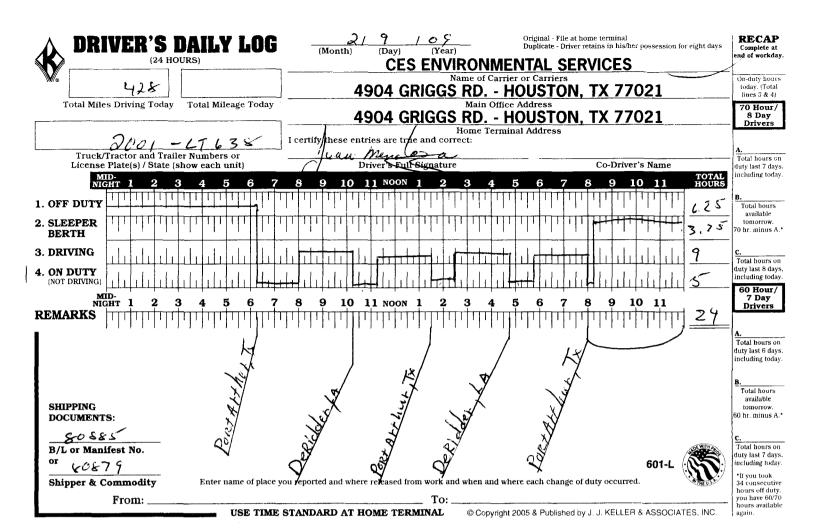


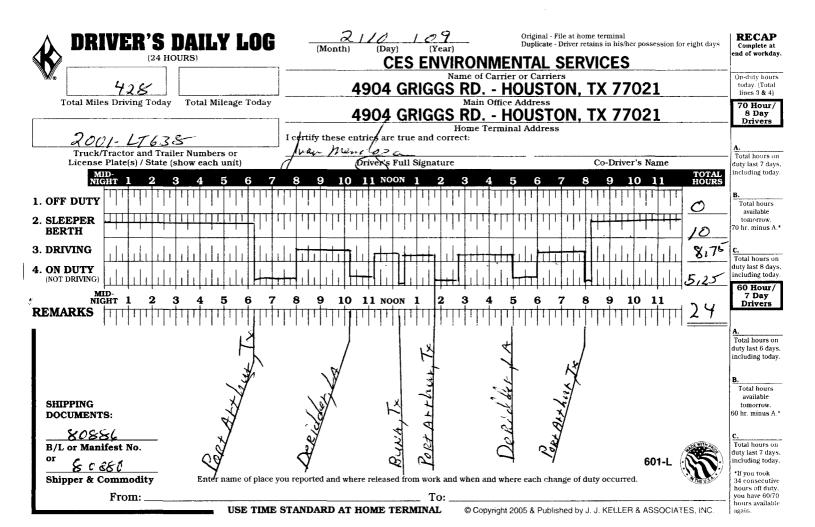


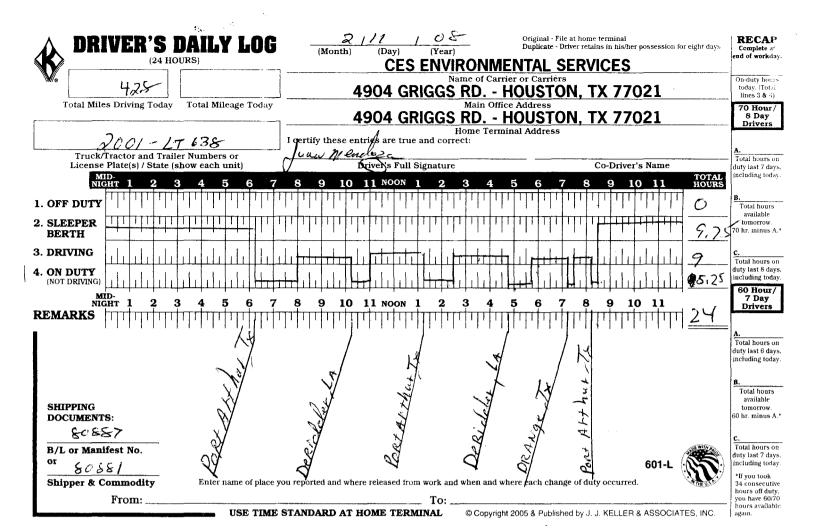


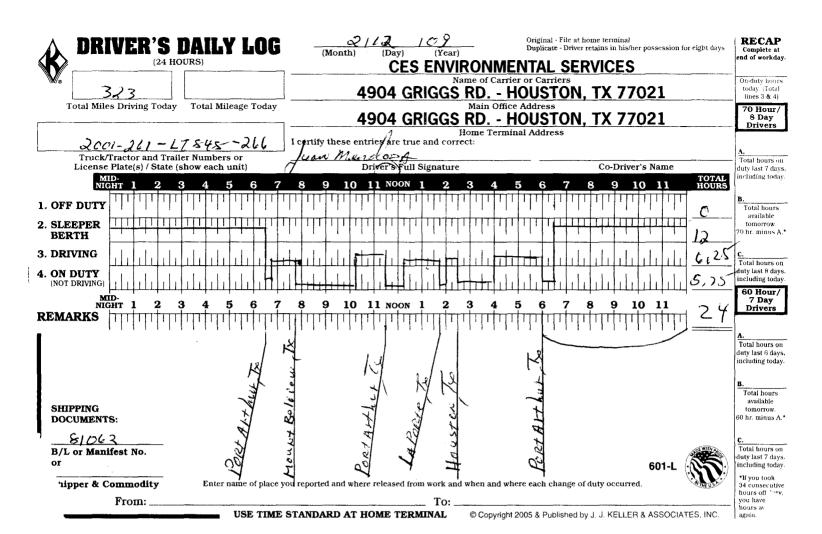


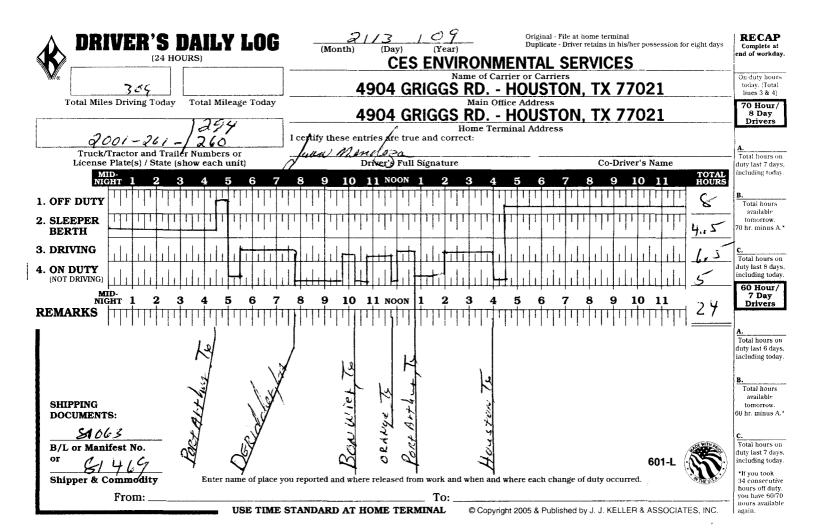
<b>78.4</b> 0	DAILY LOG	(Month) (Day) (Year)	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight days	RECAP Complete at end of workday
Total Miles Driving Tod	ay Total Mileage Today	4904 GRIGGS RD	Carrier or Carriers HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
			HOUSTON, TX 77021 Terminal Address	8 Day Drivers
Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Truck/Tractor and Tractor	Driver's Full Signature	Co-Driver's Name	Total hours on duty last 7 days	
MID- NIGHT 1 2	3 4 5 6 7	8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 TOTAL HOURS	including today.
1. OFF DUTY 2. SLEEPER BERTH				Total hours available tomorrow. 70 hr. minus A.
3. DRIVING				C. Total hours on
4. ON DUTY (NOT DRIVING)				duty last 8 days including today.
REMARKS TO THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF THE TENTE OF T	3 4 5 6 7	8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 	7 Day
				Total hours on duty last 6 days including today.
SHIPPING DOCUMENTS:			aff Duty	B. Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No. or		ou reported and where released from work and when	Port Arthur To 2-1-09 601-L	C. Total hours on duty last 7 days including today.
Shipper & Commodity From:	Enter name of place y	ou reported and where released from work and when  To:	and where each change of duty occurred.	34 consecutive hours off duty, you have 60/70
	USE TIME		pyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available again.



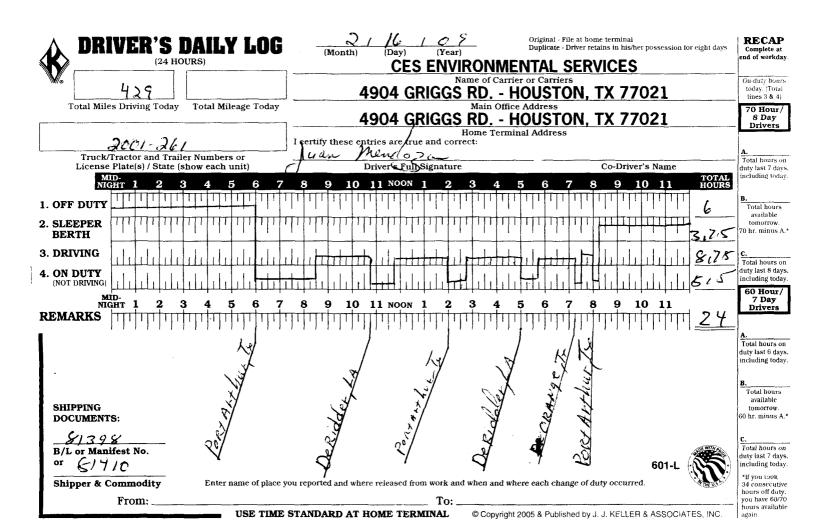


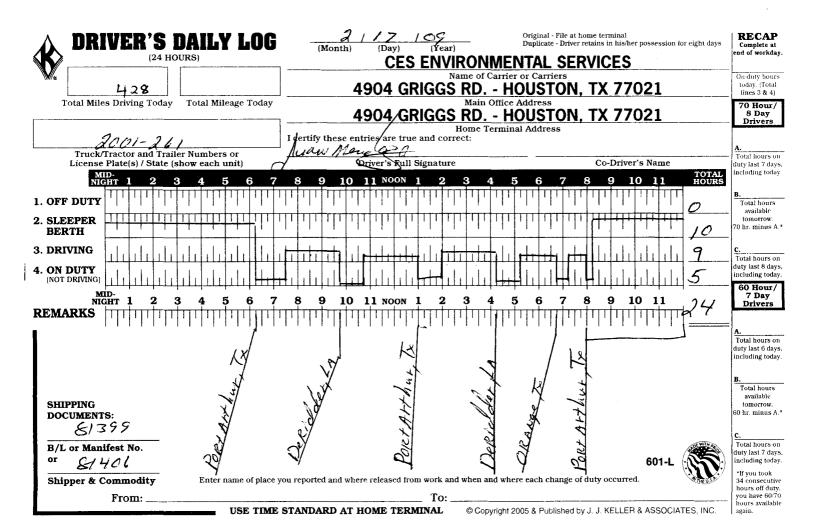




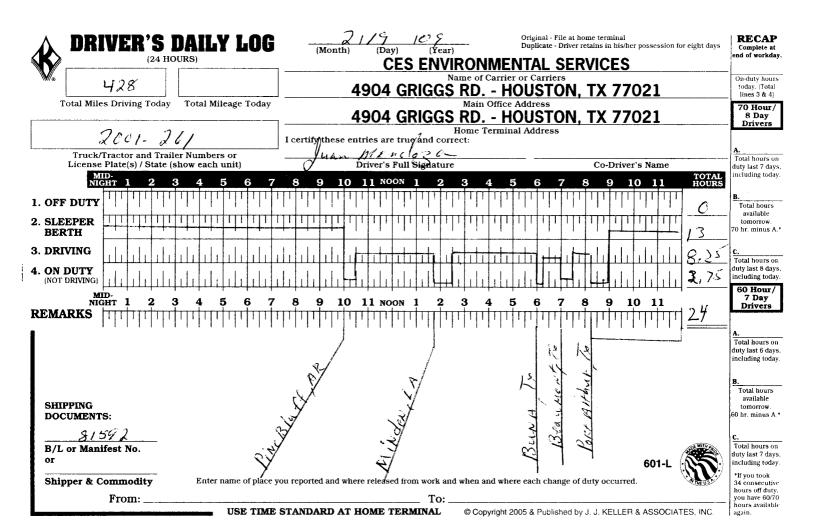


DRIVER'S DAILY LOG	(Month) (Day) (Year) Original - File at home terminal Duplicate - Driver retains in his/her possession for eight of CES ENVIRONMENTAL SERVICES										
<b>W</b> .	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)									
Total Miles Driving Today Total Mileage Today	Main Office Address 4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers									
	Home Terminal Address I certify these entries are true and correct:										
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	Total hours on duty last 7 days									
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOURS	including today.									
1. OFF DUTY	24	Total hours available									
2. SLEEPER BERTH	Ci	tomorrow. 70 hr. minus A.*									
3. DRIVING		C. Total hours on									
4. ON DUTY (NOT DRIVING)		duty last 8 days. including today.									
NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers									
• • • • • • • • • • • • • • • • • • •	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	= <b>A.</b>									
	off Duty	Total hours on duty last 6 days, including today.									
SHIPPING	0 ff Duty Houston To 2-14-09 2-15-09	B. Total hours available tomorrow.									
DOCUMENTS:	2-14-09	60 hr. minus A.*									
B/L or Manifest No. or	2-15-09 601-L	C. Total hours on duty last 7 days including today.									
Shipper & Commodity Enter name of place y	ou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty,									
From:	To:  STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available again.									





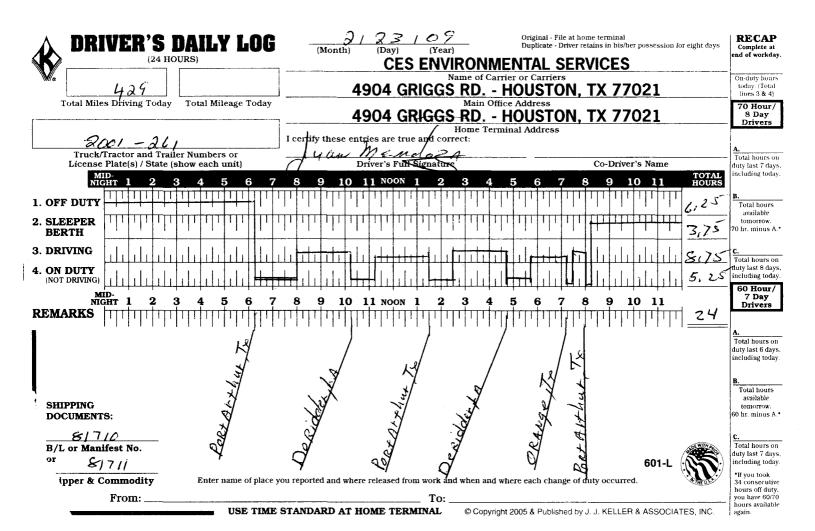
DRIVER'S DAILY LOG	(Month) (Day) (Year)  CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
<b>V</b> . 420	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours today. [Total lines 3 & 4]
Total Miles Driving Today Total Mileage Today	Main Office Address 4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
2001-261	Home Terminal Address I certify these entries are tyle and correct:	Α.
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	Total hours on duty last 7 days.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 TOTAL HOURS	including today.
1. OFF DUTY	1.25	Total hours available
2. SLEEPER BERTH	(.23	tomorrow. 70 hr. minus A.*
3. DRIVING	111111111111111111111111111111111111111	C. Total hours on duty last 8 days.
4. ON DUTY (NOT DRIVING)	<u> </u>	including today.
NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	7 Day Drivers
		A. Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		B. Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No.	601-L	C. Total hours on duty last 7 days. including today.
Shipper & Commodity Enter name of place y	ou reported and where released from work and when and where each change of duty occurred.	*If you took 34 consecutive hours off duty.
From:USE TIME	To:  STANDARD AT HOME TERMINAL  © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available again.

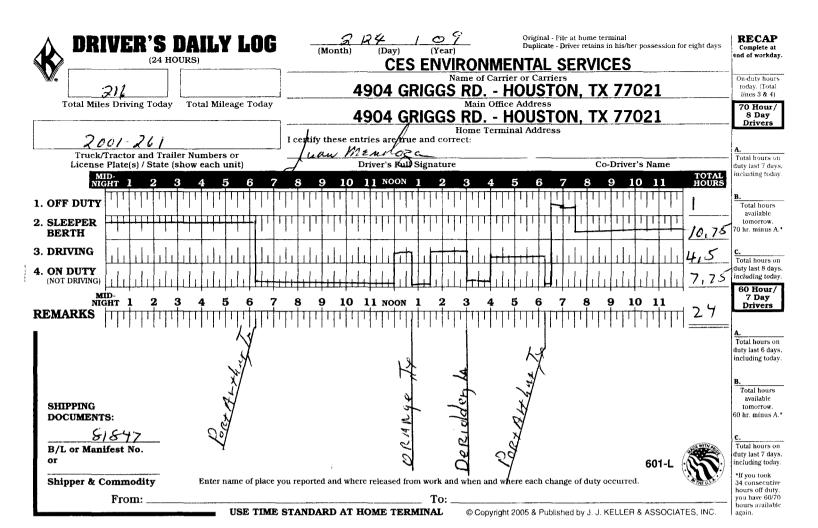


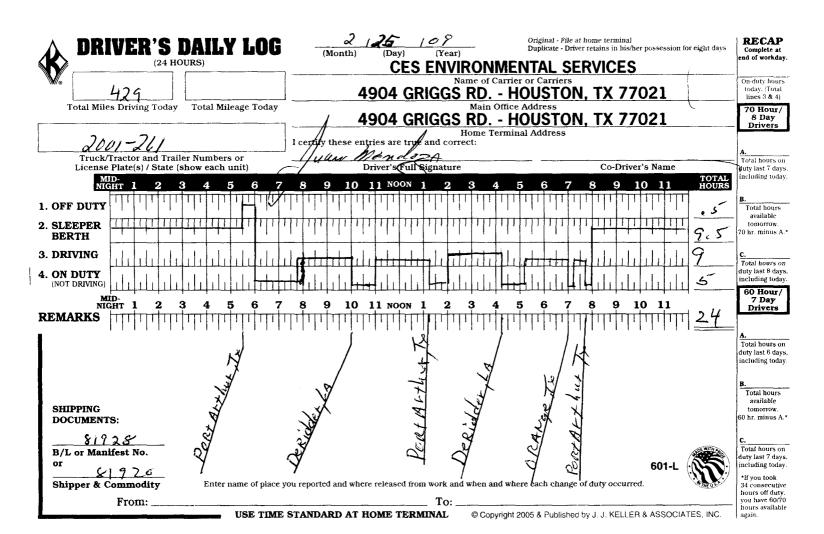
DRIVER'S DAILY LOG	2 / 20 / 05 (Month) (Day) (Year) CES ENVIR	Original - File at home terminal Duplicate - Driver retains in his/her possession for eight day	RECAP Complete at end of workday.
<b>M.</b> 545		me of Carrier or Carriers RD HOUSTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today		Main Office Address RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
2001-241		ome Terminal Address	DIIVEIS
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature	Co-Driver's Name	Total hours on duty last 7 days.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2	3 4 5 6 7 8 9 10 11 TOTAL	:S
1. OFF DUTY	' ';' ' ' ' ;' ' ' ' ' ' ' ' ' ' ' ' '	0	Total hours available
2. SLEEPER BERTH		9,75	tomorrow. 70 hr. minus A.*
3. DRIVING		<del>┊┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋</del>	C. Total hours on duty last 8 days.
4. ON DUTY (NOT DRIVING)	<del>┟╍╬╍┺╍┩</del> ╷╎╎┤╻╏╷╎╷╏╻╏╷╎╎╏╻╏╻╎┟┡┱	+1	including today.
NIGHT 1 2 3 4 5 6 7	8 9 10 11 noon 1 2	3 4 5 6 7 8 9 10 11	7 Day Drivers
`````````````````````````````````````	`\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	[3]	<u>A.</u>
4		1	Total hours on duty last 6 days, including today.
Lies	47	777	B.
SHIPPING	\$	<u> </u>	Total hours available tomorrow.
DOCUMENTS:	Aku	G 5	60 hr. minus A.*
B/L or Manifest No.	a de la companya de l		Total hours on duty last 7 days, including today.
<u>81420</u>	ou reported and where released from work and	when and where each change of duty occurred.	*If you took 34 consecutive
From:	To:		hours off duty, you have 60/70 hours available
USE TIME	STANDARD AT HOME TERMINAL	© Copyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	again.

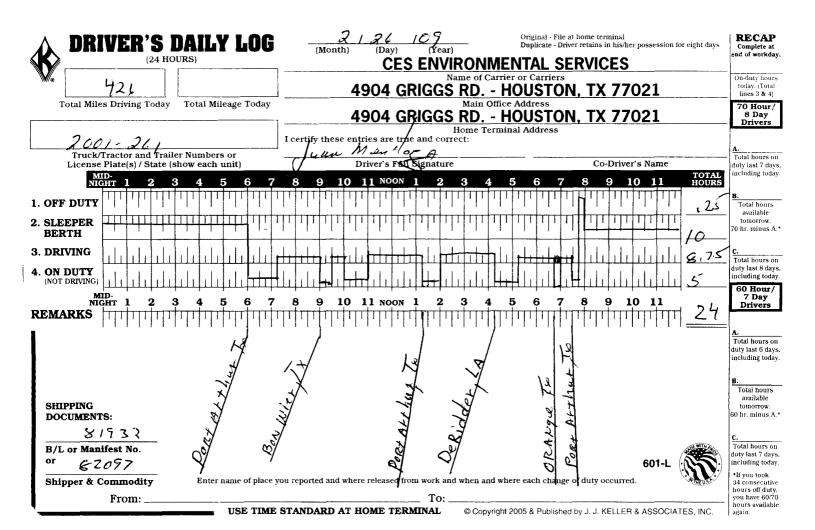
DRIVER'S DAILY LOC	(Month) (Day) (Year)  CES ENVIRONMEN		RECAP Complete at end of workday.
<b>W</b> *•	4904 GRIGGS RD HO	USTON, TX 77021	On-duty hours today. [Tota! lines 3 & 4]
Total Miles Driving Today Total Mileage Toda	4904 GRIGGS RD HO		70 Hour/ 8 Day Drivers
	Home Terminal I certify these entries are true and correct:	Address	Δ
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature	Co-Driver's Name	Total hours on duty last 7 days.
MID- NIGHT 1 2 3 4 5 6	7 8 9 10 11 NOON 1 2 3 4 5	6 7 8 9 10 11 TOTAL HOURS	including today.
1. OFF DUTY 2. SLEEPER		11.75	Total hours available tomorrow.
BERTH		1 1 1 7.25	70 hr. minus A.*
3. DRIVING			C. Total hours on
4. ON DUTY (NOT DRIVING)	│ <u>┡╂╅┞╍┧╅╂┰╂┰╂┰╂┰╂┰╀</u> ┦╏╏┞╏╎╎╏╏╎╎╏╏╏╏╎╎╎	1   1   1   1   1   1   1   1   1   5	duty last 8 days. including today.
MID- NIGHT 1 2 3 4 5 6	7 8 9 10 11 NOON 1 2 3 4 5	6 7 8 9 10 11	60 Hour/ 7 Day Drivers
REMARKS			
j:			Total hours on duty last 6 days, including today.
			B. Total hours available
SHIPPING DOCUMENTS:			tomorrow. 60 hr. minus A.*
B/L or Manifest No.		601-L	Total hours on duty last 7 days, including today.
Shipper & Commodity Enter name of place	e you reported and where released from work and when and where	each change of duty occurred.	*If you took 34 consecutive hours off duty,
From:USE TIN	To: E STANDARD AT HOME TERMINAL © Copyright 200	5 & Published by J. J. KELLER & ASSOCIATES, INC.	you have 60/70 hours available again.

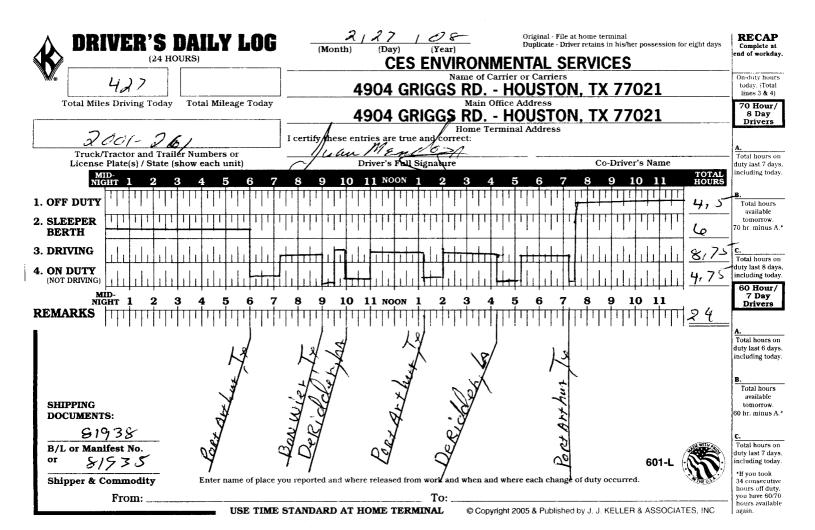
	DRI	VE											- File at home terminal e - Driver retains in his/her possession for eight days SERVICES							RECAP Complete at end of workday											
<b>W</b> / ₈			0										49	04	GF	≀IG		R							. T)	X 7	77(	02:	1		On-duty hours today. (Total lines 3 & 4)
	Total Miles	s Driv	ing T	oday	To	tal Mi	leage	Toda	,  -	4904 GRIGGS RD HOUSTON, TX 77021  Main Office Address  4904 GRIGGS RD HOUSTON, TX 77021  Home Terminal Address  I certify these entries are true and correct:															70 Hour/ 8 Day Drivers						
L	Truck/I License	Plate							^	Ceruiy	ches	1	ihi		me	Signa		24							С	o-D	river	's Na	me	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	A. Total hours on duty last 7 days
	MI NIG		1 :	2	3	4	5	6	7	8	9	10	15	NO	ON	1	2	3	4	ļ	5	6		7	8	9	_1	0 1		TOTAL HOURS	including today
1. OF	F DUTY	4				+++	+++	+++	+++	1111	+++	+	+++	111	111	+++	╀	Ш	4		+	Н	111	₩	+++	+	++	41		24	B. Total hours available
	EEPER RTH	П		111				TT				T	71	П	П		T		П				П	T	ПП		Π	П		C	tomorrow. 70 hr. minus A.
3. DR	LIVING	H	1.1.			111	1.1.			,   ,   ,	1,1,			ارا		الال	1		ارار	 			di				$ \mathbf{l}_{i} $	ılı	1.1.	0	C. Total hours on
	I <b>DUTY</b> T DRIVING)		بلنا											Ш	ىلى				Ш				Ш							0	duty last 8 days including today
REM	MI NIG		1 :	2 :	3 <del> </del>	<b>4</b> <del>  , , , ,</del>	, 5 <del>           </del>	, 6 <del>1</del> 111	, 7	<b>8</b>	9 :	10	11	NO	ON	1 1	2 +	3	4	<u>.</u>	5	6		, 7 <del>  _ , , ,</del>	8	9	1	0 1	L <b>1</b> <del>                                      </del>	' ∃ 24€	7 Day Drivers
		'   '	'   '		1,1,		1,1,	' '		' ' '	' '		'	' '	111	' '	'	' '	' '	'   '	'	'	' '	'	' '	' '	'	' '	'   '		=   A.
																							0	<del>f</del>	}	)،	λ÷	>			Total hours on duty last 6 days including today
	IPPING CUMENTS	<b>S</b> :																					Po	rt,	A+7	He	ur	7,	0		B. Total hours available tomorrow. 60 hr. minus A.
or	L or Mani			_																								60	)1-L		C. Total hours on duty last 7 days including today. *If you took
Sh	ipper & Co			7		Enter	name	of plac	e you	reporte	ed and	l wh	ere re	elease	d fro			d wh	en ar	ıd wh	еге е	each	char	nge of	duty	occi	ırred	l.		THE US	34 consecutive hours off duty,
		Fro	m: _				USI	E TIM	Œ ST	(AND	ARD A	ΑТ	HON	ME T	ERM		0: _ L	©	Copy	/right	2005	5 & P	ublis	hed b	y <b>J</b> . J.	KEL	LER	& AS	SOCIA	TES, INC.	you have 60/70 hours available again.





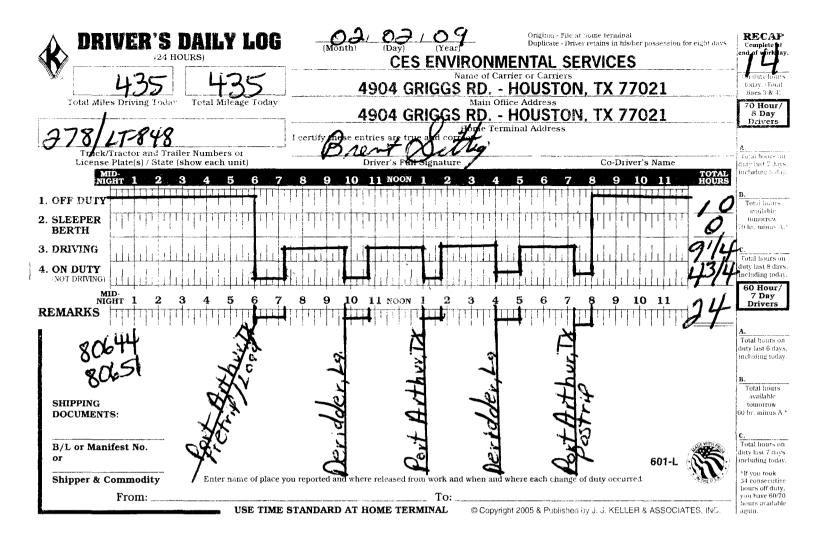


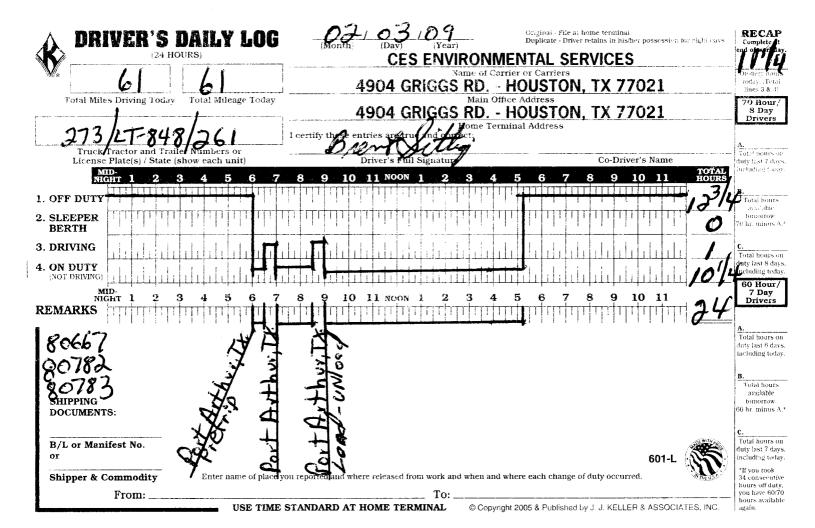


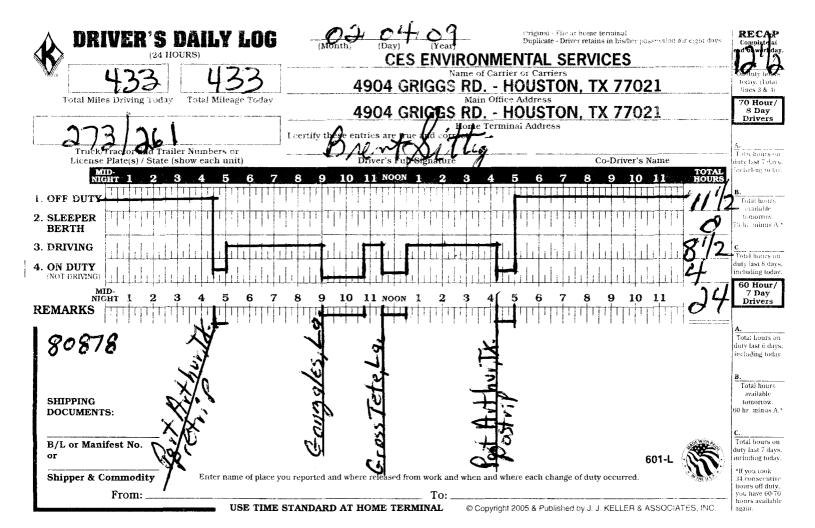


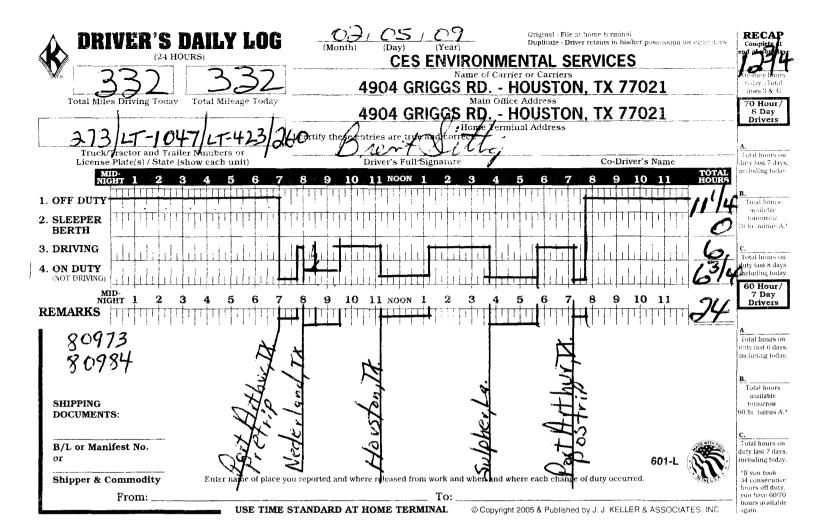
DRIVER'S 1		. , , , , , , ,	Year)	Original - File at home terminal Ouplicate - Driver retains in his/her possession  TAL SERVICES	n for eight days  RECAP  Complete at end of workday
V. 0			Name of Carrier o	r Carriers USTON, TX 77021	On-duty hours today. (Total lines 3 & 4)
Total Miles Driving Today	Total Mileage Today	4904 GRIG		<b>USTON, TX 77021</b>	70 Hour/ 8 Day Drivers
		I certify these entries are true and		Address	A .
Truck/Tractor and Trail License Plate(s) / State (s		Driver's Full Segn		Co-Driver's Name	Total hours on duty last 7 days
MID- NIGHT 1 2	3 4 5 6 7	8 9 10 11 NOON 1	2 3 4 5	6 7 8 9 10 11	TOTAL including today
1. OFF DUTY					B. Total hours
2. SLEEPER BERTH					available tomorrow. 70 hr. minus A.
3. DRIVING					C. Total hours or
4. ON DUTY (NOT DRIVING)					duty last 8 days including today
NIGHT 1 2 :	3 4 5 6 7	8 9 10 11 NOON 1	2 3 4 5	6 7 8 9 10 11	24 Privers
			an -É.	F D. 4V	A. Total hours on duty last 6 days including today
			C 1.	F Duty ALThur To	B. Total hours
SHIPPING DOCUMENTS:			Poper	Althor bo	available tomorrow. 60 hr. minus A.
B/L or Manifest No. or				601-L	Total hours on duty last 7 days including today
Shipper & Commodity	Enter name of place yo	ou reported and where released from wo		each change of duty occurred.	*If you took 34 consecutive hours off duty.
From:	USE TIME 9	STANDARD AT HOME TERMINA	Co:	5 & Published by J. J. KELLER & ASSOC	you have 60/70 hours available again.

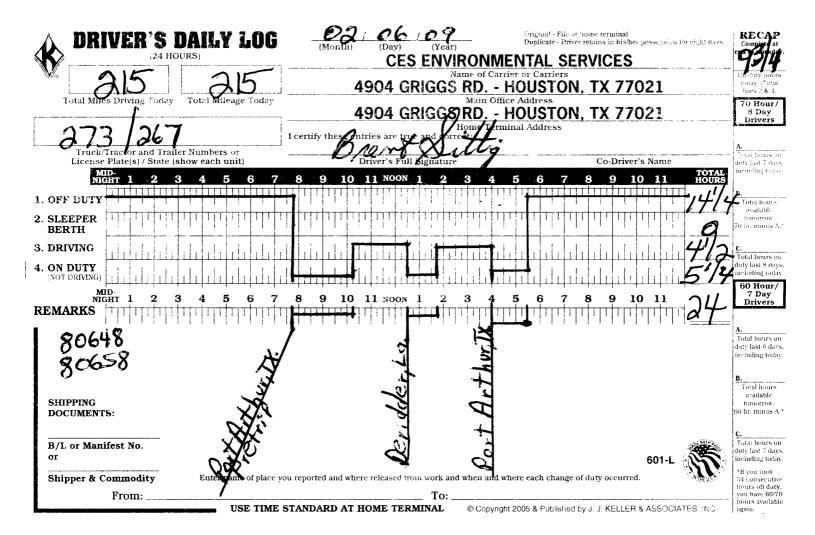
A DRIVER'S DAILY LOG		Origina: - File at home terminal Duplicate - Driver retains in his/her possession for eight Cov-	RECAP Complete at
(24 HOURS)	The state of the s	MENTAL SERVICES	ead of workday
<b>W</b> .,		arrier or Carriers - HOUSTON, TX 77021	On-discardings today, Total diaes 3 & 4
Total Miles Driving Fodoy Total Mileage Today	Main C	office Address - HOUSTON, TX 77021	70 Hour/ 8 Day
	Home De	rminal Address	Drivers
Truck/Tractor and Trailer Numbers or	I certify these entries are true and direct	•	<u>A.</u>
License Plate(s) / State (show each unit)	Driver's Full Agnature	Co-Driver's Name	<ul> <li>Total hours on Juny last 7 days.</li> <li>Juny ming today.</li> </ul>
NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11 TOTAL HOURS	A R
1. OFF DUZY		34	Total aours available
2. SLEEPER BERTH			tonsorrow 70 hr. minus A
3. DRIVING			<u>c.</u>
4. ON DUTY	<del>┇┋┋</del>		Total hours on duty last 8 days, including today.
(NOT DRIVING)	<u>╒</u> <del>╒┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋</del>		60 Hour/ 7 Day
NIGHT 1 2 3 4 5 6 7		. 5 6 7 8 9 10 11 Turkultudu kultudu 11	Drivers
■ ■		· · · · · · · · · · · · · · · · · · ·	
			Total hours on duty last 6 days, including today.
ł			Partiting today.
			Fotal hours available
SHIPPING DOCUMENTS:			tomorrow. 60 hr. minus A.*
DOGGNADATO.			c.
B/L or Manifest No.			Total hours on duty last 7 days.
or		601-L	including today.
	you reported and where released from work and when an	d where each change of duty occurred.	34 consecutive hours off duty, you have 60/70
From: USE TIME		right 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	hours available

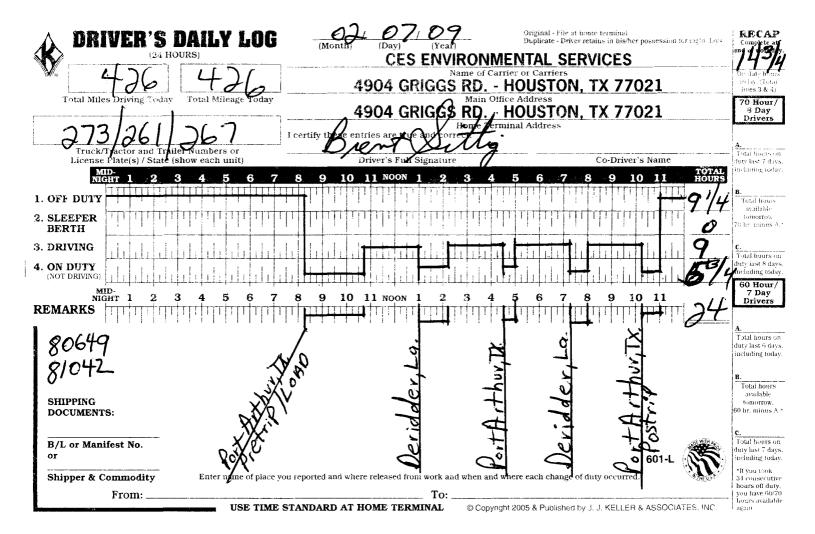




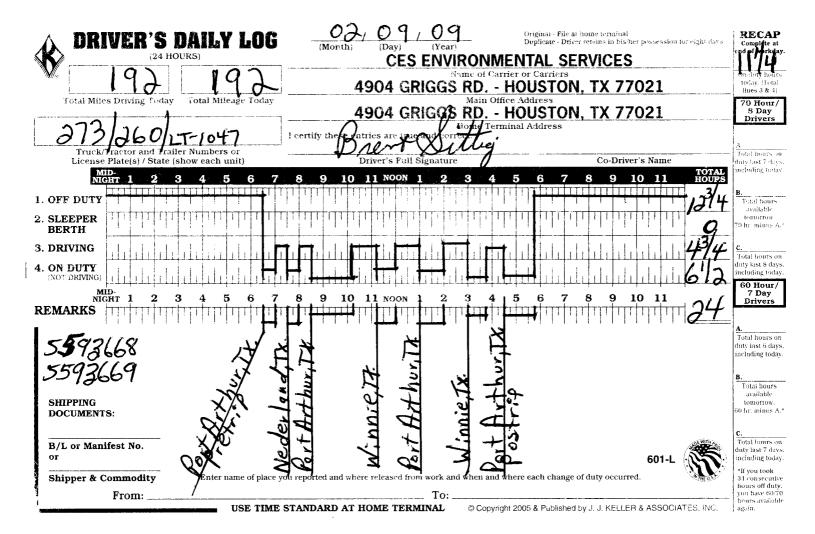


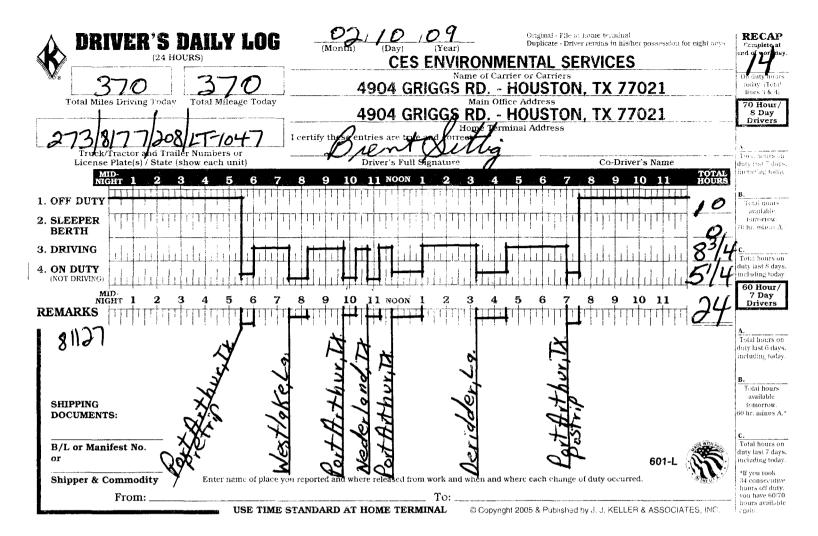


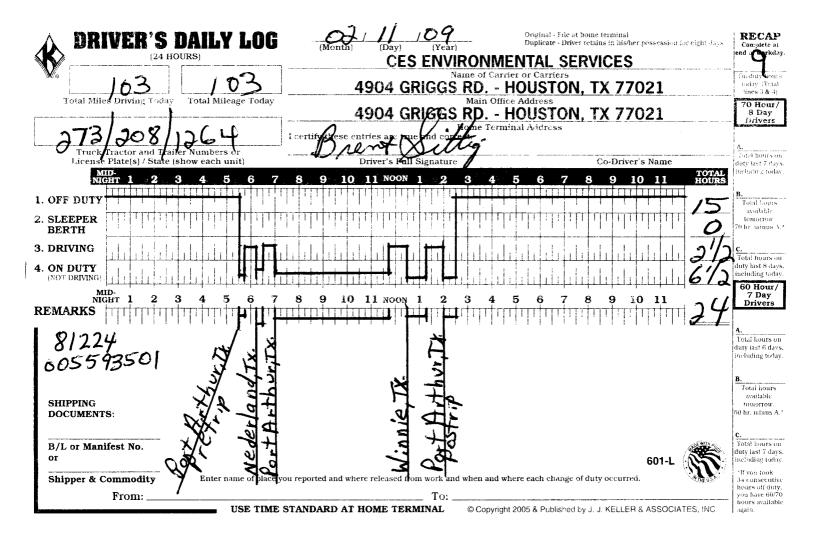


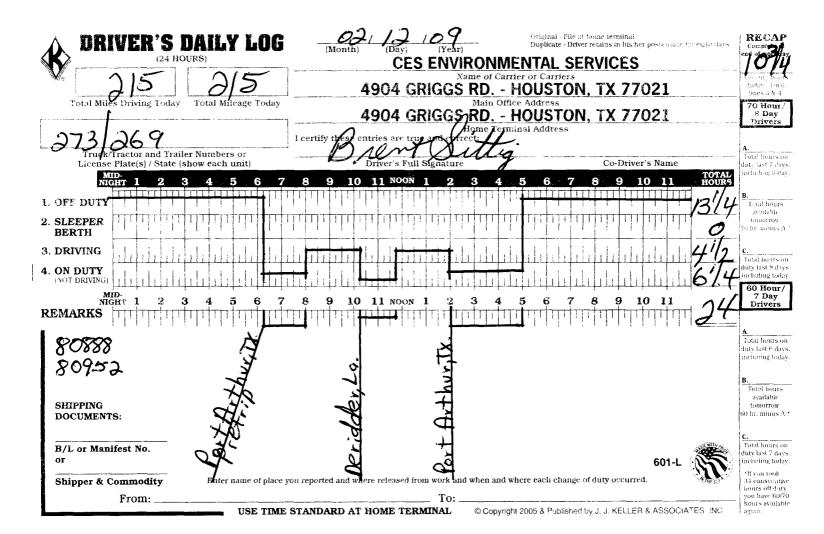


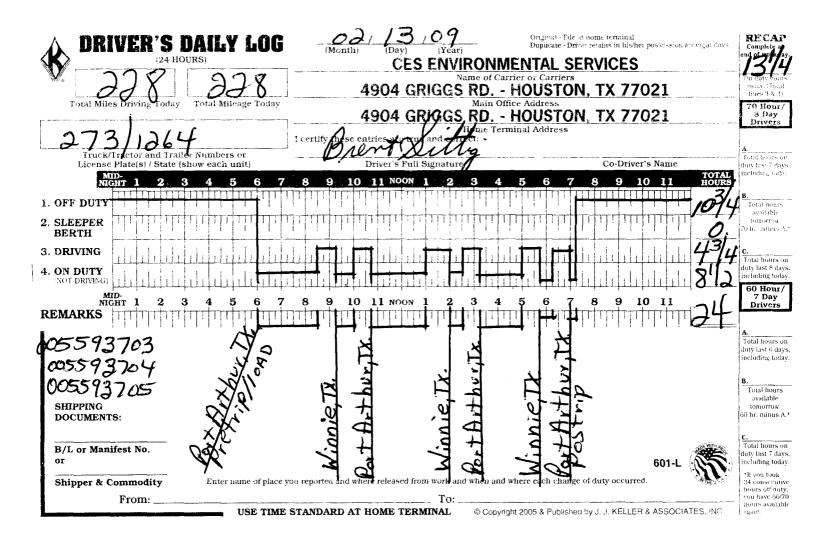
DRIVER'S DAILY LOG	OD OS O O Onginal - File of nome or mained Duplicate - Driver retains in his/her possession for engined CES ENVIRONMENTAL SERVICES	RECAP Complete at end of workday.
Mi;	Name of Carrier or Carriers 4904 GRIGGS RD HOUSTON, TX 77021	On-duty hours to-tay. (Total lines 3 & 4)
Total Miles Driving Today Total Mileage Today	4904 GRIGGS RD HOUSTON, TX 77021	70 Hour/ 8 Day Drivers
	I certify these entries are true and correct	Smarrie Comments
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit)	Driver's Full Signature Co-Driver's Name	Total hours on duty last 7 Anys, leeh ding today.
MID- NIGHT 1 2 3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 HOT	DRS B.
1. OFF DUTY 2. SLEEPER BERTH		Total hours available tomorrow. To be minus A.6
3. DRIVING 4. ON DUTY		C. Total hours on duty last 8 days, including today.
MID- NIGHT 1 2 3 4 5 6 7 REMARKS	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11	60 Hour/ 7 Day Drivers
	'\' '  ' \' '  ' \' '  '  '  '  '  '  '	A. Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:		B. Total hours available tomorres 60 hr. minus A.*
B/L or Manifest No.	601-L	C. Total hours on duty last 7 days, including today.  'If you took
Shipper & Commodity Enter name of place From:	vou reported and where released from work and when and where each change of duty occurred.  To:	34 consecutive hours off duty, you have 60/70
	STANDARD AT HOME TERMINAL © Copyright 2005 & Published by J. J. KELLER & ASSOCIATES. :No	hours available





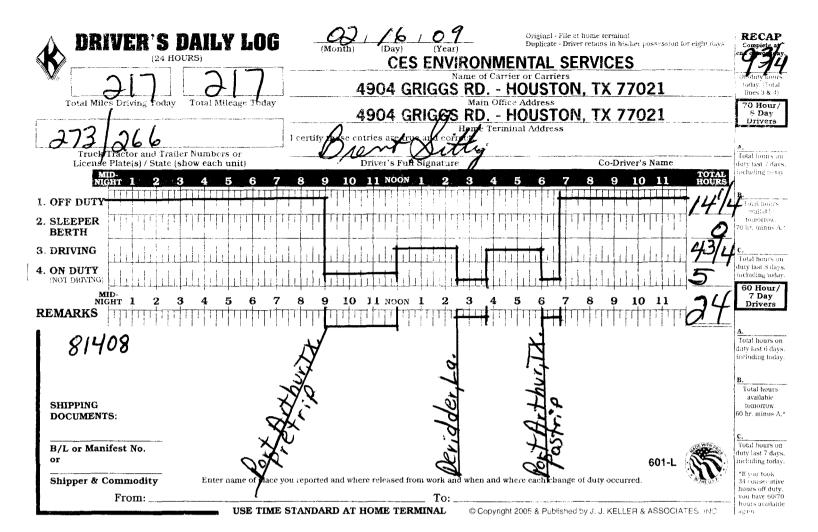


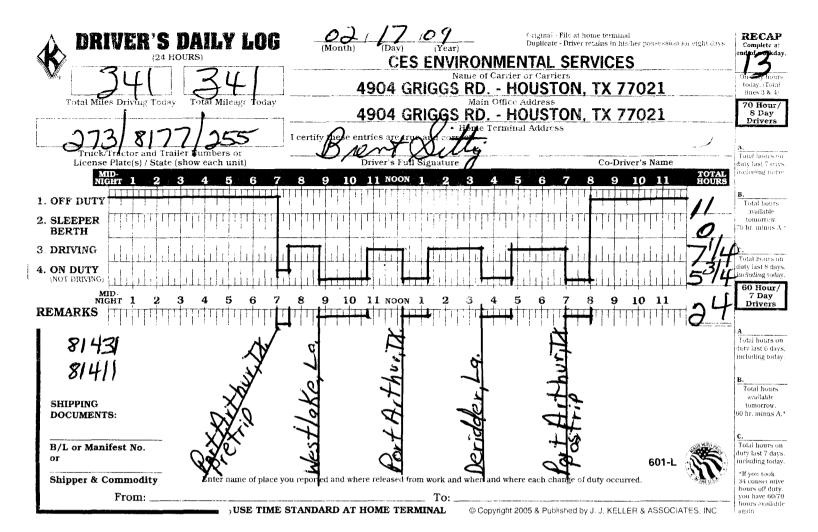


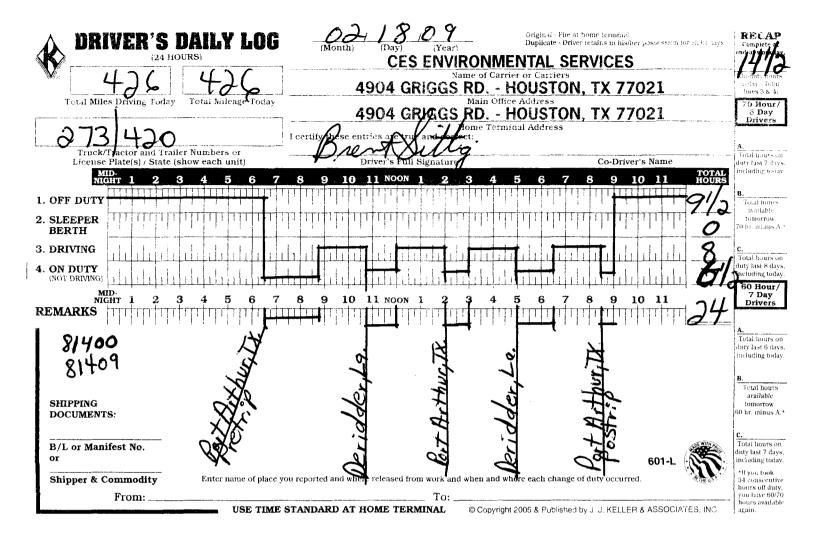


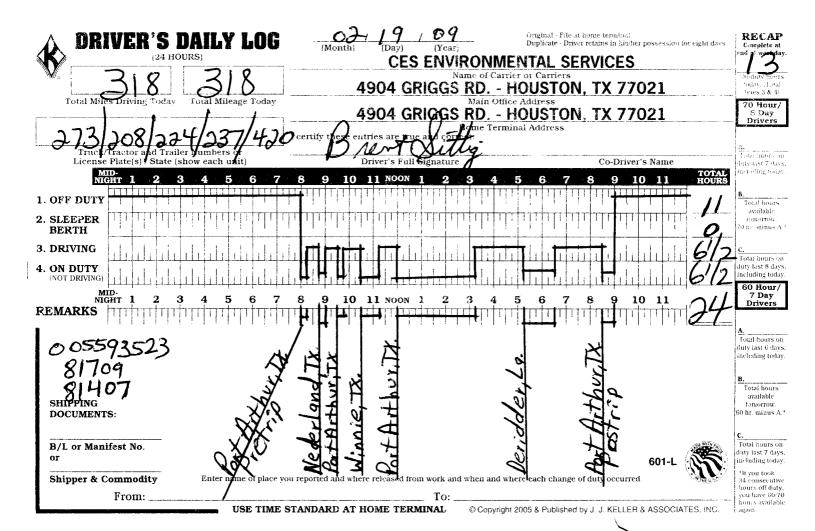
(24	DAILY LOG HOURS)  Total Mileage Today	4904 GRIGGS RD  4904 GRIGGS RD  Main Off  4904 GRIGGS RD	Original - File at home terminal Duplicate - Driver retains in his/her possession to relight days.  IENTAL SERVICES   Trier or Carriers  HOUSTON, TX 77021   HOUSTON, TX 77021   minal Address	RECAP Complete at lend of yorkday. On-duty hours teds: Ton: inues 26 4) 70 Hour/ 8 Day Drivers
Truck/Tractor and T License Plate(s) / Stat		1 certify the entries are fine and correct production of the Correct p	Co-Driver's Name	A. Total hours on duty last 7 days. including today
night 1 2  1. OFF DUTY  2. SLEEPER	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4	5 6 7 8 9 10 11 HOURS 24	B.   fotal hours   available   tonierrox
BERTH 3. DRIVING 4. ON DUTY				C. Total hours on duty last 8 days, including today.
(NOT DRIVING) MID- NIGHT 1 2 REMARKS	Ĭ <u>ſŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢŢ</u>	8 9 10 11 noon 1 2 3 4	5 6 7 8 9 10 11 $24$	60 Hour/ 7 Day Drivers
				A. Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:				B.  Total leaurs available tomorrow. 60 hr. minus A.*
B/L or Manifest No.			601-L	C. Total hours on duty last 7 days, including today.
Shipper & Commodity From:		ou reported and where released from work and when and To: STANDARD AT HOME TERMINAL © Copyrig	where each change of duty occurred.  and 2005 & Published by J. J. KELLER & ASSOCIATES. INC.	*If you took 34 consecutive hours off duty, you have 60/70 hours available again.

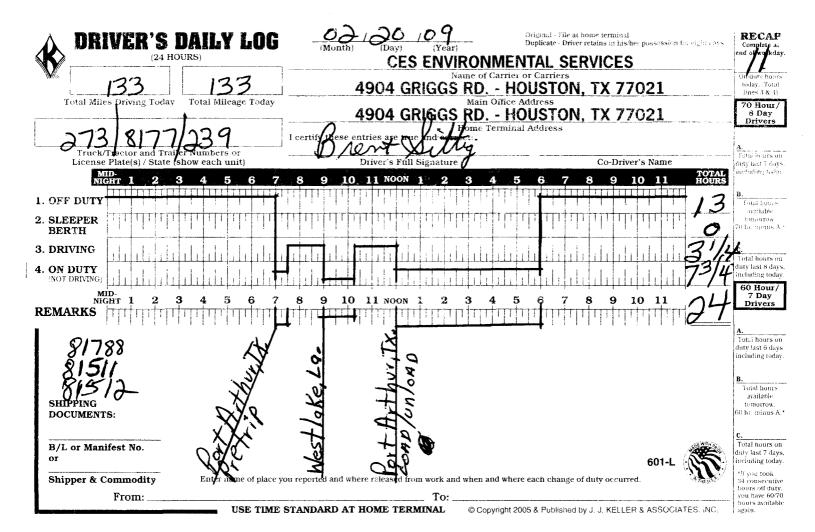
/B.#/\	DAILY LOG	CES ENVIRONMENTAL SERVICE	is/her possession for Cight days   Complete at end of workday.
<b>W</b> /%		Name of Carrier or Carriers  4904 GRIGGS RD HOUSTON, TX 7	77021 On-duft hours today (Total times 3 & 1)
Total Miles Driving Tod	ay Total Mileage Today	Main Office Address  4904 GRIGGS RD HOUSTON, TX 7  Home Terminal Address  L certify these entries are the analyze the first state of the first	70 Hour/
Truck/Tractor and T License Plate(s) / Stat MID-		Drent Sille	iver's Name  A. Total hours on duty tast 7 days. Total.
NIGHT 1 2	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9	10 11 HOURS  B. Total hours
2. SLEEPER BERTH			available tomorrow. 70 hr. minus A.*
3. DRIVING 4. ON DUTY			O Total hours on druy last 8 days, including today.
MID- NIGHT 1 2 REMARKS	3 4 5 6 7	8 9 10 11 NOON 1 2 3 4 5 6 7 8 9	10 11 60 Hour/ 7 Day Drivers
			A. Total hours on duty last 6 days, factacting today.
SHIPPING DOCUMENTS:			B. Total hours available tomorrow. 60 hr. minus A.*
B/L or Manifest No. or			601-L C. Total hours on thuy last 7 days. Including today.
Shipper & Commodity	Enter name of place y	ou reported and where released from work and when and where each change of duty occu	hours off duty.
From:	USE TIME	To:COpyright 2005 & Published by .J. J. KEL	you have 60/70 hours available again.

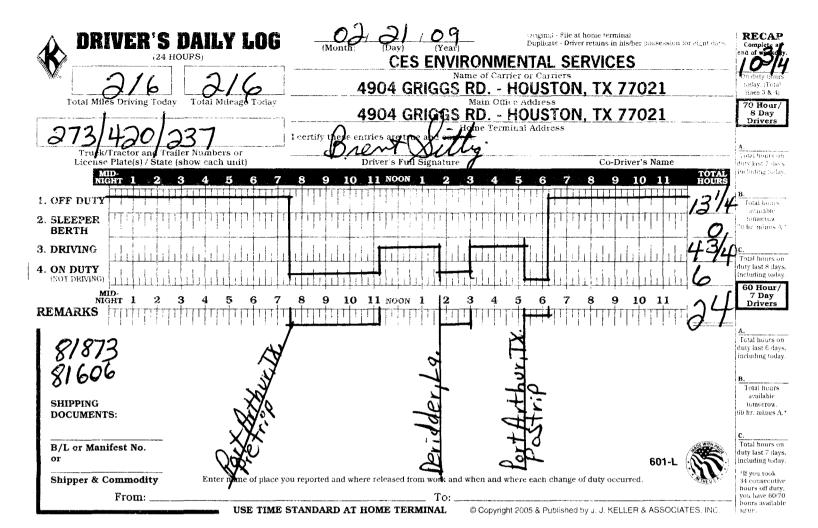












A DRIVER'S DAILY L	(24,)	Original - File at home terminal Dupificate - Driver retains in his/her possession for eight days	RECAP Complete ai
(24 HOURS)	Name o	NMENTAL SERVICES Of Carrier or Carriers O HOUSTON, TX 77021	Oreduty bears today. Total lines 3 & 41
Total Miles Driving Today Total Mileage	4904 G <b>RJ</b> GGS RD	n Office Address HOUSTON, TX 77021 Terminal Address	70 Hour/ 8 Day Drivers
Truck/Tractor and Trailer Numbers or License Plate(s) / State (show each unit) MiD-	Driver's July Signatury	Co-Driver's Name  4 5 6 7 8 9 10 11 HOURS	A, Total hears on duty list 7 days, including today.
1. OFF DUTY 1. OFF DUTY 1.	7 8 9 10 11 NOON 1 2 3	4 5 6 7 8 9 10 11 HOURS	B. Total hours waitable
2. SLEEPER BERTH 3. DRIVING		6	tomorrow.  70 hr. minus A.:
4. ON DUTY (NOT DRIVING) MID-			Total hours on duty last 8 days, meluding today  60 Hour/ 7 Day
REMARKS THE THE THE THE THE THE THE THE THE THE	7 8 9 10 11 noon 1 2 3		Drivers A.
			Total hours on duty last 6 days, including today.
SHIPPING DOCUMENTS:			Lotal hours available tomorrow 60 hr. minus A.*
B/L or Manifest No. or		601-L	C. Total hours on duty last 7 days, including today. "If you took
From:	place you reported and where released from work and when  To:  TIME STANDARD AT HOME TERMINAL  © C	opyright 2005 & Published by J. J. KELLER & ASSOCIATES, INC.	34 consecutive hours off duty, you have 60/70 hours available

